

=> FILE REG

FILE 'REGISTRY' ENTERED AT 10:50:23 ON 29 NOV 2004

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STRUCTURE FILE UPDATES: 28 NOV 2004 HIGHEST RN 790189-55-8
DICTIONARY FILE UPDATES: 28 NOV 2004 HIGHEST RN 790189-55-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 10:50:31 ON 29 NOV 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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FILE COVERS 1907 - 29 Nov 2004 VOL 141 ISS 23
FILE LAST UPDATED: 28 Nov 2004 (20041128/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L8 67616 SEA FILE=REGISTRY ABB=ON PUR/PCT
L10 243 SEA FILE=REGISTRY ABB=ON L8 AND GLYCID?
L11 10123 SEA FILE=REGISTRY ABB=ON L8 AND OXIR?
L12 299441 SEA FILE=REGISTRY ABB=ON PACR/PCT
L13 12801 SEA FILE=REGISTRY ABB=ON L8 AND L12
L16 2267 SEA FILE=REGISTRY ABB=ON L13 AND (L11 OR L10)
L18 0 SEA FILE=REGISTRY ABB=ON L13 AND SACCHAR?
L19 59 SEA FILE=REGISTRY ABB=ON L13 AND LACTON?
L21 4081 SEA FILE=REGISTRY ABB=ON 557-75-5/CRN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

polyurethane

polyacrylates

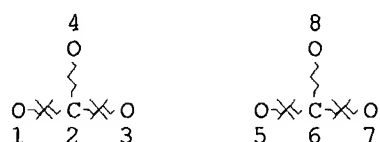
methanes & acrylates and

zero & sacchar?

alcohol

polyvinyl alcohol

L22 31 SEA FILE=REGISTRY ABB=ON L13 AND L21
 L23 2346 SEA FILE=REGISTRY ABB=ON L18 OR L19 OR L22 OR L16
 L25 184348 SEA FILE=REGISTRY ABB=ON 1.30.1/RID
 L26 2236 SEA FILE=REGISTRY ABB=ON L16 AND L25
 L27 2346 SEA FILE=REGISTRY ABB=ON L23 OR L26
 L28 1138 SEA FILE=HCAPLUS ABB=ON L23 OR L27
 L29 1100 SEA FILE=HCAPLUS ABB=ON L16
 L30 1 SEA FILE=HCAPLUS ABB=ON L29(L)?SACCHAR?
 L31 2 SEA FILE=HCAPLUS ABB=ON L29 AND ?SACCHARID?
 L32 3134 SEA FILE=REGISTRY ABB=ON SACCHARID?
 L34 286263 SEA FILE=HCAPLUS ABB=ON L32
 L36 194679 SEA FILE=HCAPLUS ABB=ON ?CARBOHYDRATE?
 L41 21 SEA FILE=HCAPLUS ABB=ON L28 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC, SX)
 L44 STR



14, 691 dicarbonates in chain or ring

NODE ATTRIBUTES:

NSPEC IS RC AT 1
 NSPEC IS RC AT 2
 NSPEC IS RC AT 3
 NSPEC IS RC AT 5
 NSPEC IS RC AT 6
 NSPEC IS RC AT 7
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

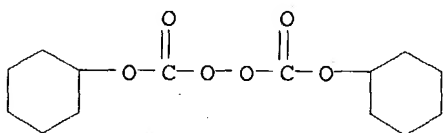
L46 14691 SEA FILE=REGISTRY SSS FUL L44
 L47 1 SEA FILE=REGISTRY ABB=ON L46 AND (L23 OR L27)
 L48 14 SEA FILE=REGISTRY ABB=ON L46 AND L13 *dicarbonates & PAR and PACR*
 L49 1 SEA FILE=HCAPLUS ABB=ON L47
 L51 11 SEA FILE=HCAPLUS ABB=ON L48
 L52 12684 SEA FILE=HCAPLUS ABB=ON L46 ~ *dicarbonates*
 L53 1 SEA FILE=HCAPLUS ABB=ON L41 AND L52
 L55 5189 SEA FILE=HCAPLUS ABB=ON L13
 L56 38 SEA FILE=HCAPLUS ABB=ON L52 AND L55
 L57 38 SEA FILE=HCAPLUS ABB=ON L51 OR L51 OR L56
 L58 1 SEA FILE=HCAPLUS ABB=ON L57 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC, SX)
 L59 333 SEA FILE=HCAPLUS ABB=ON L52 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC, SX)
 L60 2 SEA FILE=HCAPLUS ABB=ON L59 AND (STARCH OR DEXTRIN OR
 GLYCOGEN OR INULIN)
 L61 9 SEA FILE=HCAPLUS ABB=ON L59 AND (L34 OR L36 OR ?SACCHAR?)
 L62 10 SEA FILE=HCAPLUS ABB=ON L60 OR L61
 L63 1 SEA FILE=HCAPLUS ABB=ON L62 AND (?URETHAN? OR ?CYANAT?)
 L64 2 SEA FILE=HCAPLUS ABB=ON L49 OR L53 OR L58 OR L63
 L66 0 SEA FILE=HCAPLUS ABB=ON (L30 OR L31) AND (BATTER? OR ELECTROLYT?

T? OR ELECTROCHEM?/SC, SX)
 L67 2 SEA FILE=HCAPLUS ABB=ON L64 OR L66
 L68 33 SEA FILE=HCAPLUS ABB=ON L52 AND ?PENETRAT?(3A) (NETWORK? OR
 STRUCTURE?)
 L69 1 SEA FILE=HCAPLUS ABB=ON L68 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC, SX)
 L70 3 SEA FILE=HCAPLUS ABB=ON L67 OR L69

=> D L70 ALL 1-3 HITSTR

L70 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:279606 HCAPLUS
 DN 141:39217
 ED Entered STN: 06 Apr 2004
 TI Long-life air working conducting semi-IPN/ionic liquid based actuator
 AU Vidal, Frederic; Plesse, Cedric; Teyssie, Dominique; Chevrot, Claude
 CS Laboratoire de Physico-Chimie des Polymeres et des Interfaces (LPPI),
 Universite de Cergy-Pontoise, Cergy-Pontoise, F-95031, Fr.
 SO Synthetic Metals (2004), 142(1-3), 287-291
 CODEN: SYMEDZ; ISSN: 0379-6779
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 76
 AB Actuators based on semi-**interpenetrating** polymer network
 (sIPN) are synthesized from poly(3,4-ethylenedioxythiophene) and
 polybutadiene/poly(ethylene oxide) IPN. This material is similar to a
 layered actuator with the advantage that no adhesive interface is
 necessary. In the presence of actuator room temperature ionic liquid (RTIL) as
electrolyte, the actuator is be able to work in air over a period
 of one month.
 ST polyethylenedioxythiophene PEDOT semi **interpenetrating** polymer
network actuator ionic liq
 IT Actuators
 Ionic liquids
 (long-life air working conducting PEDOT-containing semi-
interpenetrating polymethacrylate-polyurethane **network**
 /ionic liquid based actuator)
 IT Conducting polymers
 (polythiophenes; long-life air working conducting PEDOT-containing semi-
interpenetrating polymethacrylate-polyurethane **network**
 /ionic liquid based actuator)
 IT **Interpenetrating** polymer networks
 (semi-**interpenetrating**; long-life air working conducting
 PEDOT-containing semi-**interpenetrating** polymethacrylate-
 polyurethane **network**/ionic liquid based actuator)
 IT 7705-08-0, Ferric chloride, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (in ethylenedioxythiophene polymerization; long-life air working conducting
 PEDOT-containing semi-**interpenetrating** polymethacrylate-
 polyurethane **network**/ionic liquid based actuator)
 IT 174899-82-2, 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide
 RL: MOA (Modifier or additive use); USES (Uses)
 (long-life air working conducting PEDOT-containing semi-
interpenetrating polymethacrylate-polyurethane **network**
 /ionic liquid based actuator)

- IT 9003-17-2D, Polybutadiene, hydroxy-terminated, polymers with Desmodur N 3300 104559-01-5D, Desmodur N 3300, polymers with hydroxy-terminated polybutadiene 108927-94-2 126213-51-2, Poly(3,4-ethylenedioxythiophene)
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (long-life air working conducting PEDOT-containing semi-**interpenetrating** polymethacrylate-polyurethane **network** /ionic liquid based actuator)
- IT 1561-49-5, Dicyclohexyl peroxydicarbonate
 RL: CAT (Catalyst use); USES (Uses)
 (methacrylate polymerization catalyst; long-life air working conducting PEDOT-containing semi-**interpenetrating** polymethacrylate-polyurethane **network**/ionic liquid based actuator)
- IT 77-58-7, Dibutyltin dilaurate
 RL: CAT (Catalyst use); USES (Uses)
 (urethane bond formation catalysts; long-life air working conducting PEDOT-containing semi-**interpenetrating** polymethacrylate-polyurethane **network**/ionic liquid based actuator)
- RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Baughman, R; Synth Met 1996, V78, P339 HCAPLUS
 - (2) Bay, L; Adv Mater 2003, V15(4), P310 HCAPLUS
 - (3) Bonhote, P; Inorg Chem 1996, V35, P1168 HCAPLUS
 - (4) Chen, X; Chem Mater 1996, V8, P2439 HCAPLUS
 - (5) de Paoli, M; Handbook of Organic Conductive Molecules and Polymers, Conductive Polymers: Synthesis and Electrochemical Properties 1997, V2, P773
 - (6) Ding, J; Chem Mater 2003, V15, P2392 HCAPLUS
 - (7) Fuller, J; J Electrochem Soc 1997, V144, P3881 HCAPLUS
 - (8) Jager, W; Sens Actuators B 1999, V56, P73
 - (9) Lu, W; Science 2002, V297, P983 HCAPLUS
 - (10) Madden, J; Synth Met 1999, V105, P61 HCAPLUS
 - (11) Madden, J; Synth Met 2000, V113, P185 HCAPLUS
 - (12) Osada, Y; Polymer Sensor and Actuators 2000
 - (13) Otero, T; Adv Mater 2003, V15(4), P279 HCAPLUS
 - (14) Sansinena, J; Electroactive Polymer Actuator as Artificial Muscles, Chapter 7 2001, P193
 - (15) Sperling, L; Interpenetrating Polymer Networks 1991
 - (16) Vidal, F; J Appl Polym Sci in press
 - (17) Vidal, F; Proceeding of SPIE, Smart Structures and Materials, Electroactive Polymer Actuators and Devices 2002, V4695, P95 HCAPLUS
 - (18) Wasserscheid, P; Angew Chem Int Ed 2000, V39, P3772 HCAPLUS
 - (19) Welton, T; Chem Rev 1999, V99, P2071 HCAPLUS
 - (20) Zhou, D; Electrochim Acta 2003, V48, P2355 HCAPLUS
- IT 1561-49-5, Dicyclohexyl peroxydicarbonate
 RL: CAT (Catalyst use); USES (Uses)
 (methacrylate polymerization catalyst; long-life air working conducting PEDOT-containing semi-**interpenetrating** polymethacrylate-polyurethane **network**/ionic liquid based actuator)
- RN 1561-49-5 HCAPLUS
- CN Peroxydicarbonic acid, dicyclohexyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



L70 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:446203 HCAPLUS
 DN 137:35471
 ED Entered STN: 13 Jun 2002
 TI Polymer gel **electrolyte** secondary cell and electrical
 double-layer capacitor
 IN Yoshida, Hiroshi; Hata, Kimiyo; Maruo, Tatsuya; Sato, Takaya
 PA Nisshinbo Industries, Inc., Japan
 SO Eur. Pat. Appl., 34 pp.
 CODEN: EPXXDW

DT Patent
 LA English
 IC ICM H01M006-18
 ICS H01M006-22; H01M010-40; H01G009-02
 CC 52-2 (**Electrochemical**, Radiational, and Thermal Energy
 Technology)
 Section cross-reference(s): 35, 38, 76

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1213778	A2	20020612	EP 2001-310223	20011206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002175837	A2	20020621	JP 2000-371277	20001206
CA 2364298	AA	20020606	CA 2001-2364298	20011205
US 2002102464	A1	20020801	US 2001-2171	20011205
PRAI JP 2000-371277	A	20001206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1213778	ICM	H01M006-18
	ICS	H01M006-22; H01M010-40; H01G009-02
EP 1213778	ECLA	H01G009/02D
US 2002102464	ECLA	H01G009/02D

AB A polymer gel **electrolyte** includes an **electrolyte** solution composed of a plasticizer with at least two carbonate structures on the mol. and an **electrolyte** salt, in combination with a matrix polymer. Secondary **batteries** made with the polymer gel **electrolyte** can operate at a high capacitance and a high current, have a broad service temperature range and a high level of safety, and are thus particularly well-suited for use in such applications as lithium secondary cells and lithium ion secondary cells. Elec. double-layer capacitors made with the polymer gel **electrolyte** have a high output voltage, a large output current, a broad service temperature range and excellent safety.

ST polymer gel **electrolyte** lithium secondary **battery**;
 elec double layer capacitor polymer gel **electrolyte**; safety
 polymer gel **electrolyte battery** capacitor

IT Alkali metal compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (activation by; polymer gel **electrolyte** secondary cell and
 elec. double-layer capacitor)

IT Capacitors
 (double layer; polymer gel **electrolyte** secondary cell and
 elec. double-layer capacitor)

IT Polymer **electrolytes**
 (gel; polymer gel **electrolyte** secondary cell and elec.

applicants

- double-layer capacitor)
- IT Secondary **batteries**
(lithium; polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT **Battery electrolytes**
Combustion
Conducting polymers
Ionic conductivity
Mesophase pitch
Plasticizers
Safety
(polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT Rayon, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical
process); PROC (Process)
(polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT Alkali metal salts
Carbonaceous materials (technological products)
Fluoropolymers, uses
Oxides (inorganic), uses
Phosphonium compounds
Quaternary ammonium compounds, uses
Sulfides, uses
Transition metal salts
RL: DEV (Device component use); USES (Uses)
(polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT Plastics, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(thermoplastics; polymer gel **electrolyte** secondary cell and
elec. double-layer capacitor)
- IT Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(unsatd.; polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT Lithium alloy, base
RL: DEV (Device component use); USES (Uses)
(polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT 7440-44-0, Activated carbon, uses
RL: DEV (Device component use); USES (Uses)
(activated; polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT 25014-41-9, Polyacrylonitrile
RL: CPS (Chemical process); PEP (Physical, engineering or chemical
process); PROC (Process)
(polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT 7439-93-2, Lithium, uses 21324-40-3, Lithium hexafluorophosphate
437552-20-0
RL: DEV (Device component use); USES (Uses)
(polymer gel **electrolyte** secondary cell and elec.
double-layer capacitor)
- IT 9002-89-5DP, Polyvinyl alcohol, cyanoethylated 9002-89-5DP, Polyvinyl
alcohol, dihydroxypropylated 9004-64-2DP, Hydroxypropyl cellulose,
cyanoethylated 25722-70-7DP, Polyglycidol, cyanoethylated 25722-70-7P,

Polyglycidol 437552-21-1P 437552-22-2P

437552-23-3P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(polymer gel **electrolyte** secondary cell and elec. double-layer capacitor)

IT 78-67-1, Azobisisobutyronitrile 26915-72-0, Methoxypolyethylene glycol monomethacrylate

RL: MOA (Modifier or additive use); USES (Uses)

(polymer gel **electrolyte** secondary cell and elec. double-layer capacitor)

IT 25766-14-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(polymer gel **electrolyte** secondary cell and elec. double-layer capacitor)

IT 123-25-1, Diethyl succinate 96344-18-2 153550-33-5, Amberlite IRC-76

RL: TEM (Technical or engineered material use); USES (Uses)

(polymer gel **electrolyte** secondary cell and elec. double-layer capacitor)

IT 437552-20-0

RL: DEV (Device component use); USES (Uses)

(polymer gel **electrolyte** secondary cell and elec. double-layer capacitor)

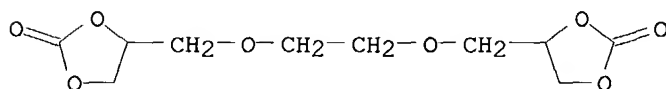
RN 437552-20-0 HCAPLUS

CN Carbonic acid, diethyl ester, polymer with 4,4'-[1,2-ethanediylbis(oxyethylene)]bis[1,3-dioxolan-2-one] and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 116170-01-5

CMF C10 H14 O8

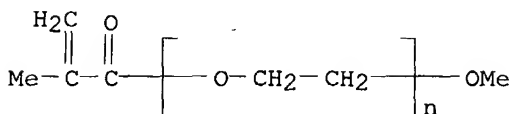


CM 2

CRN 26915-72-0

CMF (C2 H4 O)_n C5 H8 O2

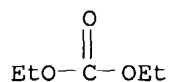
CCI PMS



CM 3

CRN 105-58-8

CMF C5 H10 O3

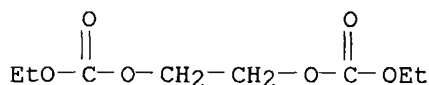


IT 437552-21-1P 437552-22-2P 437552-23-3P
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP
 (Preparation); USES (Uses)
 (polymer gel **electrolyte** secondary cell and elec.
 double-layer capacitor)
 RN 437552-21-1 HCAPLUS
 CN Carbonic acid, 1,2-ethanediyl diethyl ester, polymer with
 α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-
 ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 35466-87-6

CMF C8 H14 O6

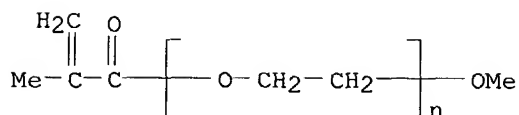


CM 2

CRN 26915-72-0

CMF (C2 H4 O)_n C5 H8 O2

CCI PMS

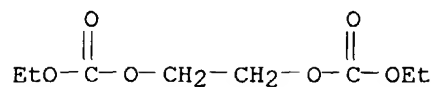


RN 437552-22-2 HCAPLUS
 CN Carbonic acid, diethyl ester, polymer with 1,2-ethanediyl bis(ethyl
 carbonate), 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane,
 α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-
 ethanediyl) and oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 35466-87-6

CMF C8 H14 O6

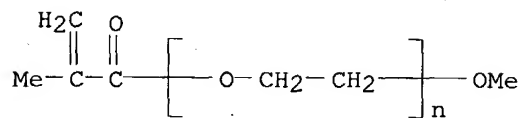


CM 2

CRN 26915-72-0

CMF (C2 H4 O)_n C5 H8 O2

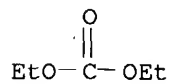
CCI PMS



CM 3

CRN 105-58-8

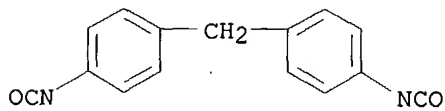
CMF C5 H10 O3



CM 4

CRN 101-68-8

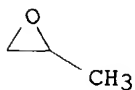
CMF C15 H10 N2 O2



CM 5

CRN 75-56-9

CMF C3 H6 O



CM 6

CRN 75-21-8

CMF C2 H4 O



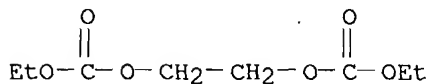
RN 437552-23-3 HCAPLUS

CN Cellulose, 2-cyanopropyl ether, polymer with 1,2-ethanediyl bis(ethyl carbonate) and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 35466-87-6

CMF C8 H14 O6

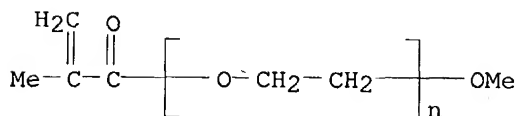


CM 2

CRN 26915-72-0

CMF (C2 H4 O)_n C5 H8 O2

CCI PMS



CM 3

CRN 60001-05-0

CMF C4 H7 N O . x Unspecified

CM 4

CRN 9004-34-6

CMF Unspecified

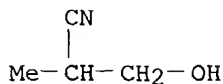
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 5

CRN 2567-01-3

CMF C4 H7 N O



L70 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:135528 HCAPLUS
DN 116:135528
ED Entered STN: 03 Apr 1992
TI Performance-oriented packaging standards; changes to classification,
hazard communication, packaging and handling requirements based on UN
standards and agency initiative
CS United States Dept. of Transportation, Washington, DC, 20590-0001, USA
SO Federal Register (1990), 55(246), 52402-729, 21 Dec 1990
CODEN: FEREAC; ISSN: 0097-6326
DT Journal
LA English
CC 59-6 (Air Pollution and Industrial Hygiene)
AB The hazardous materials regulations under the Federal Hazardous Materials
Transportation Act are revised based on the United Nations recommendations
on the transport of dangerous goods. The regulations cover the
classification of materials, packaging requirements, and package marking,
labeling, and shipping documentation, as well as transportation modes and
handling, and incident reporting. Performance-oriented stds. are adopted
for packaging for bulk and nonbulk transportation, and SI units of
measurement generally replace US customary units. Hazardous material
descriptions and proper shipping names are tabulated together with hazard
class, identification nos., packing group, label required, special
provisions, packaging authorizations, quantity limitations, and vessel
stowage requirements.
ST hazardous chem transport packaging
IT Infection
(agents, packaging and transport of, stds. for)
IT Resin acids and Rosin acids
RL: USES (Uses)
(aluminum salts, packaging and transport of, stds. for)
IT Alkaline earth metals
RL: USES (Uses)
(amalgams, packaging and transport of, stds. for)
IT Alkali metals, miscellaneous
RL: MSC (Miscellaneous)
(amalgams, packaging and transport of, stds. for)
IT Dyes
(coal tar, packaging and transport of, stds. for)
IT Packaging materials
(for hazardous material transport, stds. for)
IT Standards, legal and permissive
(for hazardous material transportation)
IT Bromates
Chlorites
RL: USES (Uses)
(inorg., packaging and transport of, stds. for)
IT Appliances
(life-saving, packaging and transport of, stds. for)
IT Borates

RL: USES (Uses)
(mixts. containing chlorates, packaging and transport of, stds. for)

IT Chlorates
RL: USES (Uses)
(mixts. containing, packaging and transport of, stds. for)

IT Diazonium compounds
RL: USES (Uses)
(nitrates, packaging and transport of, stds. for)

IT Paper
(oiled, packaging and transport of, stds. for)

IT Adhesives
Alcoholic beverages
Ammunition
Antifreeze substances
Bactericides, Disinfectants, and Antiseptics
Batteries, primary
Blasting gelatin
Bombs (explosives)
Carbon paper
Cartridges
Castor bean
Coating materials
Corrosive substances
Cotton
Creosote
Detonators
Dyes
Dynamite
Electric fuses
Exothermic materials
Explosives
Flavoring materials
Flue dust
Fuel cells
Fuel oil
Fuels, diesel
Fuels, jet aircraft
Fusel oil
Fuses, explosives
Gas oils
Hay
Herbicides
Igniters and Lighters
Insecticides
Lacrimators
Magnetic substances
Matches
Oxidizing agents
Perfumes
Pesticides
Petroleum products
Pharmaceuticals
Photoelectric devices
Poisons
Primers, explosive
Projectiles
Pyrophoric substances
Pyrotechnic compositions

Radioactive substances
Refrigerating apparatus
Rockets
Shale oils
Solvent naphtha
Sprays
Straw
Textiles
Thermoelectric devices
Torpedoes (weapons)
Turpentine
Wood preservatives
(packaging and transport of, stds. for)

IT Alcohols, miscellaneous
Aldehydes, miscellaneous
Alkali metal alloys, base
Alkali metals, miscellaneous
Alkaline earth alloys, base
Alkaline earth metals
Alkaloids, miscellaneous
Amines, miscellaneous
Arsenates
Arsenites
Asbestos
Asphalt
Bases, miscellaneous
Charcoal
Coal
Coke
Cyanates
Cyanides, miscellaneous
Fibers
Fluorides, miscellaneous
Gasoline
Helium-group gases, miscellaneous
Hydrides
Hypochlorites
Kerosine
Ketones, uses
Ligroine
Metals, miscellaneous
Naphtha
Natural gas
Natural gas condensates
Nitrates, miscellaneous
Nitrites
Perchlorates
Permanganates
Peroxides, uses
Petroleum
Petroleum gases, liquefied
Polyamines
Polyesters, miscellaneous
Rosin oil
Selenates
Selenites
Sulfonic acids, miscellaneous
Tar

Terpenes and Terpenoids, miscellaneous

Thiols, uses

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT Refrigeration

(agents, packaging and transport of, stds. for)

IT Sulfonic acids, miscellaneous

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(alkane, packaging and transport of, stds. for)

IT Phenols, miscellaneous

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(alkyl, packaging and transport of, stds. for)

IT Alkali metals, compounds

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(amides, packaging and transport of, stds. for)

IT Fertilizers

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(ammonium nitrate, packaging and transport of, stds. for)

IT Gasoline additives

(antiknock, packaging and transport of, stds. for)

IT Sulfonic acids, miscellaneous

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(arene, packaging and transport of, stds. for)

IT Nitro compounds

RL: USES (Uses)

(aryl, potassium salts, packaging and transport of, stds. for)

IT Nitro compounds

RL: USES (Uses)

(aryl, sodium salts, packaging and transport of, stds. for)

IT Fuels

(aviation, packaging and transport of, stds. for)

IT Propellants

(black powder, packaging and transport of, stds. for)

IT Hydraulic fluids

(brake, packaging and transport of, stds. for)

IT Flours and Meals

(cakes, packaging and transport of, stds. for)

IT Resin acids and Rosin acids

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(calcium salts, packaging and transport of, stds. for)

IT Essential oils

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(camphor, packaging and transport of, stds. for)

IT Silanes

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(chloro, packaging and transport of, stds. for)

IT Solvents

(cleaning, packaging and transport of, stds. for)

IT Tar

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(coal, packaging and transport of, stds. for)

IT Fuel gases
(coal gas, packaging and transport of, stds. for)

IT Naphthenic acids, compounds
Resin acids and Rosin acids
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(cobalt salts, packaging and transport of, stds. for)

IT Coconut
(copra, packaging and transport of, stds. for)

IT Asbestos
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(crocidolite, packaging and transport of, stds. for)

IT Petroleum products
(distillates, packaging and transport of, stds. for)

IT Rockets
(engines, packaging and transport of, stds. for)

IT Fire
(extinguishers, packaging and transport of, stds. for)

IT Pyrotechnic compositions
(fireworks, packaging and transport of, stds. for)

IT Pyrotechnic compositions
(flare, packaging and transport of, stds. for)

IT Silicates, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(fluoro-, packaging and transport of, stds. for)

IT Gasoline
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(gasohol, packaging and transport of, stds. for)

IT Ammunition
(grenades, packaging and transport of, stds. for)

IT Asbestos
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(grunerite, packaging and transport of, stds. for)

IT Sulfites
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(hydrogen, packaging and transport of, stds. for)

IT Organic compounds, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(iodyl, packaging and transport of, stds. for)

IT Group VIII elements
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(iron-group, packaging and transport of, stds. for)

IT Air
Corrosive substances
(liquid, packaging and transport of, stds. for)

IT Gases
(liquefied, packaging and transport of, stds. for)

IT Resin acids and Rosin acids

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(manganese salts, packaging and transport of, stds. for)

IT Castor bean
Fish
(meal, packaging and transport of, stds. for)

IT Organometallic compounds
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(metal alkyls, packaging and transport of, stds. for)

IT Explosives
(mines, packaging and transport of, stds. for)

IT **Carbohydrates** and Sugars, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(nitro, packaging and transport of, stds. for)

IT Aromatic compounds
RL: USES (Uses)
(nitro, potassium salts, packaging and transport of, stds. for)

IT Aromatic compounds
RL: USES (Uses)
(nitro, sodium salts, packaging and transport of, stds. for)

IT Fertilizers
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(nitrogen, packaging and transport of, stds. for)

IT Peroxides, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(organic, packaging and transport of, stds. for)

IT Coating materials
(paints, packaging and transport of, stds. for)

IT Essential oils
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(pine, packaging and transport of, stds. for)

IT Inks
(printing, packaging and transport of, stds. for)

IT Matches
(safety, packaging and transport of, stds. for)

IT Alkaloids, compounds
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(salts, packaging and transport of, stds. for)

IT Containers
(shipping, for hazardous material transport, stds. for)

IT Pyrotechnic compositions
(signal rockets, packaging and transport of, stds. for)

IT Pyrotechnic compositions
(smoke-generating, packaging and transport of, stds. for)

IT Propellants
(smokeless, packaging and transport of, stds. for)

IT Pharmaceutical dosage forms
(tinctures, packaging and transport of, stds. for)

IT Ammunition
Pyrotechnic compositions
(tracers, packaging and transport of, stds. for)

IT Resin acids and Rosin acids

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(zinc salts, packaging and transport of, stds. for)

IT 64-17-5

RL: OCCU (Occurrence)

(alcoholic beverages, packaging and transport of, stds. for)

IT 50-00-0, Formaldehyde, miscellaneous 54-11-5, Nicotine 54-11-5D, Nicotine, compds. 55-63-0, Nitroglycerin 55-68-5, Phenylmercuric nitrate 56-18-8, 3,3'-Iminodipropylamine 56-23-5, miscellaneous 56-38-2, Parathion 57-06-7, Allyl **isothiocyanate** 57-14-7 57-24-9D, Strychnine, salts 60-00-4, EDTA, miscellaneous 60-24-2 60-29-7, Diethyl ether, miscellaneous 60-34-4, Methylhydrazine 60-57-1, Dieldrin 62-38-4, Phenylmercuric acetate 62-53-3, Aniline, miscellaneous 62-74-8, Sodium fluoroacetate 64-17-5, Ethanol, miscellaneous 64-18-6, Formic acid, miscellaneous 64-18-6D, Formic acid, chloro derivs. 64-19-7, Acetic acid, miscellaneous 64-67-5, Diethyl sulfate 66-25-1, Hexaldehyde 67-56-1, Methanol, miscellaneous 67-63-0, Isopropanol, miscellaneous 67-64-1, Acetone, miscellaneous 67-66-3, Chloroform, miscellaneous 68-11-1, Thioglycolic acid, miscellaneous 68-12-2, N,N-Dimethylformamide, miscellaneous 70-11-1, Phenacyl bromide 70-30-4, Hexachlorophene 71-23-8, n-Propanol, miscellaneous 71-41-0, 1-Pentanol, miscellaneous 71-43-2, Benzene, miscellaneous 71-55-6, 1,1,1-Trichloroethane 74-82-8, Methane, miscellaneous 74-83-9, miscellaneous 74-84-0, Ethane, miscellaneous 74-85-1, Ethylene, miscellaneous 74-86-2, Acetylene, miscellaneous 74-87-3, Methyl chloride, miscellaneous 74-88-4, Methyl iodide, miscellaneous 74-89-5, Methylamine, miscellaneous 74-90-8, Hydrogen cyanide, miscellaneous 74-93-1, Methyl mercaptan, miscellaneous 74-95-3, Dibromomethane 74-96-4, Ethyl bromide 74-97-5, Bromochloromethane 74-98-6, Propane, miscellaneous 75-00-3, Ethyl chloride 75-01-4, miscellaneous 75-02-5, Vinyl fluoride 75-04-7, Ethylamine, miscellaneous 75-05-8, Methyl cyanide, miscellaneous 75-07-0, Acetaldehyde, miscellaneous 75-08-1, Ethyl mercaptan 75-09-2, Dichloromethane, miscellaneous 75-15-0, Carbon disulfide, miscellaneous 75-16-1, Methyl magnesium bromide 75-18-3, Dimethyl sulfide 75-19-4, Cyclopropane 75-20-7, Calcium carbide 75-21-8 75-21-8, Ethylene oxide, miscellaneous 75-25-2, Bromoform 75-26-3, 2-Bromopropane 75-28-5, Isobutane 75-28-5D, Isobutane, mixts. 75-29-6, 2-Chloropropane 75-31-0, Isopropylamine, miscellaneous 75-33-2, Isopropyl mercaptan 75-34-3, 1,1-Dichloroethane 75-35-4, miscellaneous 75-36-5, Acetyl chloride 75-38-7, 1,1-Difluoroethylene 75-39-8, Acetaldehyde ammonia 75-43-4, Dichloromonofluoromethane 75-44-5, Phosgene 75-45-6, Chlorodifluoromethane 75-46-7, Trifluoromethane 75-50-3, Trimethylamine, miscellaneous 75-52-5, Nitromethane, miscellaneous 75-54-7, Methylchlorosilane 75-55-8, Propyleneimine 75-56-9, Propylene oxide, miscellaneous 75-59-2, Tetramethylammonium hydroxide 75-60-5, Cacodylic acid 75-61-6, Dibromodifluoromethane 75-63-8 75-71-8, Dichlorodifluoromethane 75-72-9, Chlorotrifluoromethane 75-73-0, Tetrafluoromethane 75-76-3, Tetramethylsilane 75-77-4, Trimethylchlorosilane, miscellaneous 75-78-5, Dimethyldichlorosilane 75-79-6, Methyltrichlorosilane 75-83-2 75-86-5, Acetone cyanohydrin 75-87-6, Chloral 75-91-2, tert-Butyl hydroperoxide 75-94-5, Vinyltrichlorosilane 76-01-7, Pentachloroethane 76-02-8, Trichloroacetyl chloride 76-03-9, properties 76-05-1, Trifluoroacetic acid, miscellaneous 76-06-2, Chloropicrin 76-06-2D, Chloropicrin, mixts. 76-15-3 76-16-4, Hexafluoroethane 76-19-7, Octafluoropropane 76-22-2, Camphor 77-47-4, Hexachlorocyclopentadiene 77-73-6 77-78-1, Dimethyl sulfate 78-00-2, Tetraethyl lead 78-10-4,

Tetraethyl silicate 78-62-6, Dimethyldiethoxysilane 78-67-1,
 Azodiisobutyronitrile 78-76-2, 2-Bromobutane 78-78-4, Isopentane
 78-79-5, Isoprene, miscellaneous 78-81-9, Isobutylamine 78-82-0,
 Isobutyronitrile 78-83-1, Isobutanol, miscellaneous 78-84-2,
 Isobutyraldehyde 78-85-3, Methacrylaldehyde 78-87-5, Propylene
 dichloride 78-89-7, Propylene chlorohydrin 78-90-0,
 1,2-Propylenediamine 78-93-3, 2-Butanone, miscellaneous 78-94-4,
 Methyl vinyl ketone, miscellaneous 78-95-5, Monochloroacetone 79-01-6,
 Trichloroethylene, miscellaneous 79-03-8, Propionyl chloride 79-04-9,
 Chloroacetyl chloride 79-06-1, Acrylamide, miscellaneous 79-08-3,
 Bromoacetic acid 79-09-4, Propionic acid, miscellaneous 79-10-7,
 2-Propenoic acid, miscellaneous 79-11-8, Chloroacetic acid,
 miscellaneous 79-20-9, Methyl acetate 79-21-0, Peroxyacetic acid
 79-22-1 79-24-3, Nitroethane 79-29-8, 2,3-Dimethylbutane 79-30-1,
 Isobutyryl chloride 79-31-2, Isobutyric acid 79-36-7, Dichloroacetyl
 chloride 79-38-9 79-41-4, miscellaneous 79-42-5 79-43-6,
 Dichloroacetic acid, miscellaneous 79-44-7, Dimethylcarbamoyl chloride
 80-10-4, Diphenyldichlorosilane 80-15-9, Cumene hydroperoxide 80-17-1,
 Benzene sulfohydrazide 80-47-7, p-Menthane hydroperoxide 80-51-3,
 Diphenyloxide-4,4'-disulfohydrazide 80-56-8, α -Pinene 80-62-6
 81-15-2 82-71-3 85-44-9, 1,3-Isobenzofurandione 86-50-0, Azinphos
 methyl 87-68-3, Hexachlorobutadiene 87-90-1 88-17-5,
 2-Trifluoromethylaniline 88-72-2, o-Nitrotoluene 88-73-3,
 o-Chloronitrobenzene 88-74-4, o-Nitroaniline 88-75-5, o-Nitrophenol
 88-89-1 89-58-7, p-Nitroxyline 91-17-8, Decahydronaphthalene
 91-20-3, Naphthalene, miscellaneous 91-20-3D, Naphthalene, diozonide
 derivs. 91-22-5, Quinoline, miscellaneous 91-59-8,
 β -Naphthylamine 91-66-7, N,N-Diethylaniline 92-52-4D, Biphenyl,
 chloro derivs. 92-52-4D, Biphenyl, halo derivs. 92-59-1,
 N-Ethyl-N-benzylaniline 92-87-5, Benzidine 93-58-3, Methyl benzoate
 94-17-7, p-Chlorobenzoyl peroxide 94-36-0, Benzoyl peroxide,
 miscellaneous 95-48-7, miscellaneous 95-50-1, o-Dichlorobenzene
 95-54-5, o-Phenylenediamine, miscellaneous 95-55-6, o-Aminophenol
 95-80-7 95-85-2, 2-Amino-4-chlorophenol 96-12-8, Dibromochloropropane
 96-22-0, Diethyl ketone 96-23-1 96-24-2, Glycerol α -
 monochlorohydrin 96-32-2, Methyl bromoacetate 96-33-3 96-34-4,
 Methyl chloroacetate 96-37-7, Methyl cyclopentane 96-41-3,
 Cyclopentanol 97-62-1, Ethyl isobutyrate 97-63-2 97-64-3, Ethyl
 lactate 97-72-3, Isobutyric anhydride 97-85-8, Isobutyl isobutyrate
 97-86-9 97-88-1 97-95-0 97-96-1, 2-Ethylbutyraldehyde 98-00-0,
 Furfuryl alcohol 98-01-1, Furfural, miscellaneous 98-07-7,
 Benzotrifluoride 98-08-8, Benzotrifluoride 98-09-9, Benzene sulfonyl
 chloride 98-12-4, Cyclohexyltrichlorosilane 98-13-5,
 Phenyltrichlorosilane 98-16-8, 3-Trifluoromethylaniline 98-82-8,
 Isopropylbenzene 98-83-9, miscellaneous 98-85-1, α -Methylbenzyl
 alcohol 98-87-3, Benzylidene chloride 98-88-4, Benzoyl chloride
 98-94-2 98-95-3, Nitrobenzene, miscellaneous 99-08-1, m-Nitrotoluene
 99-09-2, m-Nitroaniline 99-35-4, Trinitrobenzene 99-99-0,
 p-Nitrotoluene 100-00-5 100-01-6, p-Nitroaniline, miscellaneous
 100-02-7, p-Nitrophenol, miscellaneous 100-17-4 100-34-5, Benzene
 diazonium chloride 100-36-7, N,N-Diethylethylenediamine
 RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering
 or chemical process); BIOL (Biological study); PROC (Process)
 (packaging and transport of, stds. for)
 IT 100-37-8, Diethylaminoethanol 100-39-0, Benzyl bromide 100-41-4,
 Ethylbenzene, miscellaneous 100-42-5, miscellaneous 100-44-7, Benzyl
 chloride, miscellaneous 100-47-0, Benzonitrile, miscellaneous
 100-50-5, 1,2,3,6-Tetrahydrobenzaldehyde 100-57-2, Phenylmercuric

hydroxide 100-61-8, N-Methylaniline, miscellaneous 100-63-0,
 Phenylhydrazine 100-66-3, Anisole, miscellaneous 100-73-2, Acrolein
 dimer 101-25-7, N,N'-Dinitrosopentamethylenetetramine 101-68-8
 101-77-9, 4,4'-Diaminodiphenyl methane 101-83-7, Dicyclohexylamine
 102-69-2, Tripropylamine 102-70-5, Triallylamine 102-81-8,
 Dibutylaminoethanol 102-82-9, Tributylamine 103-65-1, n-Propylbenzene
 103-69-5, N-Ethylaniline 103-71-9, **Phenylisocyanate**,
 miscellaneous 103-80-0, Phenylacetyl chloride 103-83-3,
 Benzyltrimethylamine 104-15-4, Toluene sulfonic acid, miscellaneous
 104-51-8, Butylbenzene 104-75-6, 2-Ethylhexylamine 104-78-9
 104-90-5, 2-Methyl-5-ethylpyridine 105-36-2 105-37-3, Ethyl propionate
 105-39-5, Ethyl chloroacetate 105-48-6, Isopropyl chloroacetate
 105-54-4, Ethyl butyrate 105-56-6, Ethyl cyanoacetate 105-57-7, Acetal
 105-58-8, Diethyl carbonate 105-64-6, Isopropyl
 peroxydicarbonate 105-74-8, Lauroyl peroxide 106-31-0, Butyric
 anhydride 106-44-5, p-Cresol, miscellaneous 106-46-7,
 p-Dichlorobenzene 106-50-3, p-Phenylenediamine, miscellaneous
 106-51-4, 2,5-Cyclohexadiene-1,4-dione, miscellaneous 106-63-8, Isobutyl
 acrylate 106-68-3, Ethyl amyl ketone 106-88-7, 1,2-Butylene oxide
 106-89-8, miscellaneous 106-92-3, Allyl glycidyl ether 106-93-4,
 Ethylene dibromide 106-95-6, Allyl bromide, miscellaneous 106-96-7,
 3-Bromopropyne 106-97-8, Butane, miscellaneous 106-97-8D, Butane,
 mixts. 106-99-0, 1,3-Butadiene, miscellaneous 107-00-6, Ethylacetylene
 107-02-8, 2-Propenal, miscellaneous 107-05-1, Allyl chloride 107-06-2,
 Ethylene dichloride, miscellaneous 107-07-3, Ethylene chlorohydrin,
 miscellaneous 107-10-8, Propylamine, miscellaneous 107-11-9,
 Allylamine 107-12-0, Propionitrile 107-13-1, Acrylonitrile,
 miscellaneous 107-14-2, Chloroacetonitrile 107-15-3, Ethylenediamine,
 miscellaneous 107-18-6, Allyl alcohol, miscellaneous 107-19-7,
 Propargyl alcohol 107-20-0, Chloroacetaldehyde 107-25-5, Vinylmethyl
 ether 107-29-9, Acetaldehyde oxime 107-30-2, Methylchloromethyl ether
 107-31-3, Methyl formate 107-37-9, Allyltrichlorosilane 107-49-3,
 Tetraethyl pyrophosphate 107-70-0 107-71-1, tert-Butyl peroxyacetate
 107-72-2, Amyltrichlorosilane 107-81-3, 2-Bromopentane 107-82-4,
 1-Bromo-3-methylbutane 107-87-9, Methyl propyl ketone 107-89-1, Aldol
 107-92-6, Butyric acid, miscellaneous 108-01-0, Dimethylethanolamine
 108-05-4, Acetic acid ethenyl ester, miscellaneous 108-09-8,
 1,3-Dimethylbutylamine 108-10-1, Methyl isobutyl ketone 108-11-2,
 Methyl isobutyl carbinol 108-18-9, Diisopropylamine 108-20-3,
 Diisopropyl ether 108-21-4, Isopropyl acetate 108-22-5, Isopropenyl
 acetate 108-23-6, Isopropyl chloroformate 108-24-7, Acetic anhydride
 108-31-6, 2,5-Furandione, miscellaneous 108-39-4, miscellaneous
 108-45-2, m-Phenylenediamine, miscellaneous 108-46-3, Resorcinol,
 miscellaneous 108-67-8, miscellaneous 108-77-0 108-83-8, Diisobutyl
 ketone 108-84-9 108-86-1, Benzene, bromo-, miscellaneous 108-87-2,
 Methyl cyclohexane 108-88-3, Toluene, miscellaneous 108-90-7,
 Chlorobenzene, miscellaneous 108-91-8, Cyclohexylamine, miscellaneous
 108-94-1, Cyclohexanone, miscellaneous 108-95-2, Phenol, miscellaneous
 108-98-5, Phenyl mercaptan, miscellaneous 109-02-4 109-09-1,
 2-Chloropyridine 109-13-7, tert-Butyl peroxyisobutyrate 109-52-4,
 Valeric acid, miscellaneous 109-53-5, Vinyl isobutyl ether 109-60-4,
 n-Propyl acetate 109-61-5, n-Propyl chloroformate 109-63-7, Boron
 trifluoride diethyl etherate 109-65-9, n-Butyl bromide 109-66-0,
 Pentane, miscellaneous 109-70-6, 1-Chloro-3-bromopropane 109-73-9,
 n-Butylamine, miscellaneous 109-74-0, Butyronitrile 109-77-3,
 Malononitrile 109-79-5, Butyl mercaptan 109-86-4, Ethylene glycol
 monomethyl ether 109-87-5, Methylal 109-89-7, Diethylamine,
 miscellaneous 109-90-0, Ethyl **isocyanate** 109-92-2, Vinyl

ethyl ether 109-93-3, Divinyl ether 109-94-4, Ethyl formate 109-95-5, Ethyl nitrite 109-99-9, Tetrahydrofuran, miscellaneous 110-00-9, Furan 110-01-0, Tetrahydrothiophene 110-02-1, Thiophene 110-12-3, 5-Methylhexan-2-one 110-16-7, Maleic acid, miscellaneous 110-18-9 110-19-0 110-22-5, Diacetyl peroxide 110-43-0, Amyl methyl ketone 110-49-6 110-54-3, Hexane, miscellaneous 110-58-7, Amylamine 110-62-3, Valeraldehyde 110-66-7, Amyl mercaptan 110-68-9, N-Methylbutylamine 110-69-0, Butyraldoxime 110-71-4, 1,2-Dimethoxyethane 110-74-7, Propyl formate 110-78-1, n-Propyl **isocyanate** 110-80-5, Ethylene glycol monoethyl ether 110-82-7, Cyclohexane, miscellaneous 110-83-8, Cyclohexene, miscellaneous 110-85-0, Piperazine, miscellaneous 110-86-1, Pyridine, miscellaneous 110-87-2 110-89-4, Piperidine, miscellaneous 110-91-8, Morpholine, miscellaneous 110-96-3, Diisobutylamine 111-15-9, Ethylene glycol monoethyl ether acetate 111-34-2, Butylvinyl ether 111-36-4, n-Butyl **isocyanate** 111-40-0 111-43-3, Dipropyl ether 111-49-9, Hexamethylenimine 111-65-9, Octane, miscellaneous 111-69-3, Adiponitrile 111-71-7, n-Heptaldehyde 111-76-2, Ethylene glycol monobutyl ether 111-92-2, Di-n-butylamine 112-04-9 112-24-3, Triethylenetetramine 112-57-2 115-07-1, Propylene, miscellaneous 115-10-6, Dimethyl ether 115-11-7, Isobutylene, miscellaneous 115-21-9, Ethyltrichlorosilane 115-25-3, Octafluorocyclobutane 116-14-3, Tetrafluoroethylene, miscellaneous 116-15-4, Hexafluoropropylene 116-16-5, Hexachloroacetone 116-54-1, Methyl dichloroacetate 118-74-1, Hexachlorobenzene 118-96-7, Trinitrotoluene 120-92-3, Cyclopentanone 121-43-7, Trimethyl borate 121-44-8, Triethylamine, miscellaneous 121-45-9, Trimethyl phosphite 121-46-0, 2,5-Norbornadiene 121-69-7, N,N-Dimethylaniline, miscellaneous 121-73-3 121-82-4, Cyclotrimethylenetrinitramine 122-51-0, Ethyl orthoformate 122-52-1, Triethyl phosphite 123-00-2, 4-Morpholinepropanamine 123-15-9 123-19-3, Dipropylketone 123-20-6, Vinyl butyrate 123-23-9, Succinic acid peroxide 123-30-8, p-Aminophenol 123-31-9, Hydroquinone, miscellaneous 123-38-6, Propionaldehyde, miscellaneous 123-42-2, Diacetone alcohol 123-54-6, 2,4-Pentanedione, miscellaneous 123-62-6, Propionic anhydride 123-63-7, Paraldehyde 123-72-8, Butyraldehyde 123-75-1, Pyrrolidine, miscellaneous 123-86-4, Butyl acetate 123-91-1, Dioxane, miscellaneous 124-02-7, Diallylamine 124-09-4, Hexamethylenediamine, miscellaneous 124-13-0, Octyl aldehyde 124-18-5, n-Decane 124-38-9, Carbon dioxide, miscellaneous 124-40-3, Dimethylamine, miscellaneous 124-41-4, Sodium methylete 124-43-6 124-65-2, Sodium cacodylate 126-98-7, Methacrylonitrile 126-99-8, Chloroprene 127-18-4, Tetrachloroethylene, miscellaneous 127-85-5, Sodium arsanilate 129-79-3 131-52-2, Sodium pentachlorophenate 131-73-7, Hexanitrodiphenylamine 131-74-8, Ammonium picrate 133-14-2 133-55-1, N,N'-Dinitroso-N,N'-dimethyl terephthalamide 134-32-7, α -Naphthylamine 138-86-3, Dipentene 138-89-6 139-02-6, Sodium phenolate

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IT 140-29-4, Phenylacetoneitrile 140-31-8, 1-Piperazineethanamine 140-80-7 140-88-5 141-32-2 141-43-5, Ethanalamine, miscellaneous 141-57-1, Propyltrichlorosilane 141-59-3, tert-Octylmercaptan 141-75-3, Butyryl chloride 141-78-6, Ethyl acetate, miscellaneous 141-79-7, Mesityl oxide 142-04-1, Aniline hydrochloride 142-29-0, Cyclopentene 142-62-1, Hexanoic acid, miscellaneous 142-82-5, Heptane, miscellaneous 142-84-7, Dipropylamine 142-96-1, Dibutyl ether 143-33-9, Sodium cyanide 144-49-0, Fluoroacetic acid 144-62-7D, Ethanedioic acid, salts

146-84-9, Silver picrate 149-74-6, Methylphenyldichlorosilane
 151-50-8, Potassium cyanide 151-56-4, Ethylenimine, miscellaneous
 156-62-7, Calcium cyanamide 260-94-6, Acridine 283-66-9, Hexamethylene
 triperoxide diamine 287-23-0, Cyclobutane 287-92-3, Cyclopentane
 291-64-5, Cycloheptane 298-00-0, Methyl parathion 298-07-7 302-01-2,
 Hydrazine, miscellaneous 309-00-2, Aldrin 352-93-2, Diethyl sulfide
 353-36-6, Ethyl fluoride 353-42-4, Boron trifluoride dimethyl etherate
 353-50-4, Carbonyl fluoride 353-59-3 354-32-5, Trifluoroacetylchloride
 357-57-3, Brucine 360-89-4, Octafluorobut-2-ene 428-59-1,
 Hexafluoropropylene oxide 431-03-8, Butanedione 460-19-5, Cyanogen
 462-06-6, Fluorobenzene 462-08-8, m-Aminopyridine 462-95-3,
 Diethoxymethane 463-04-7, Amyl nitrite 463-49-0, Propadiene
 463-58-1, Carbonyl sulfide 463-71-8, Thiophosgene 463-82-1,
 2,2-Dimethylpropane 479-45-8 501-53-1, Benzyl chloroformate
 502-98-7D, salts 503-74-2, Isopentanoic acid 504-24-5, 4-Pyridinamine
 504-29-0, 2-Pyridinamine 506-64-9, Silver cyanide (Ag(CN)) 506-68-3,
 Cyanogen bromide 506-77-4, Cyanogen chloride 506-85-4, Fulminic acid
 506-93-4, Guanidine nitrate 506-96-7, Acetyl bromide 507-02-8, Acetyl
 iodide 507-09-5, Thioacetic acid, miscellaneous 507-70-0, Borneol
 509-14-8, Tetranitromethane 512-85-6, Ascaridole 513-35-9,
 2-Methyl-2-butene 513-38-2 513-42-8, Methallyl alcohol 513-48-4,
 2-Iodobutane 513-86-0, Acetyl methyl carbinol 517-25-9,
 Trinitromethane 517-92-0, 1,8-Dihydroxy-2,4,5,7-tetranitroanthraquinone
 519-44-8D, 2,4-Dinitroresorcinol, heavy metal salts 532-27-4,
 Chloracetophenone 533-51-7, Silver oxalate 534-07-6,
 1,3-Dichloroacetone 534-15-6, 1,1-Dimethoxyethane 534-22-5,
 2-Methylfuran 535-13-7, Ethyl-2-chloropropionate 540-18-1, Amyl
 butyrate 540-42-1, Isobutyl propionate 540-54-5, Propyl chloride
 540-67-0, Ethyl methyl ether 540-73-8 540-82-9, Ethylsulfuric acid
 540-84-1, Isooctane 541-41-3, Ethyl chloroformate 542-55-2, Isobutyl
 formate 542-62-1, Barium cyanide 542-88-1, Dichlorodimethyl ether,
 symmetrical 543-27-1, Isobutyl chloroformate 543-59-9, Amyl chloride
 544-16-1, Butyl nitrite 544-25-2, Cycloheptatriene 544-97-8, Dimethyl
 zinc 545-55-1, Tris(1-aziridinyl)phosphine oxide 554-12-1, Methyl
 propionate 554-84-7, m-Nitrophenol 555-54-4, Magnesium diphenyl
 556-24-1, Methyl isovalerate 556-56-9, Allyl iodide 556-61-6, Methyl
isothiocyanate 556-88-7 556-89-8, Nitrourea 557-17-5, Methyl
 propyl ether 557-19-7, Nickel cyanide (Ni(CN)₂) 557-20-0, Diethylzinc
 557-21-1, Zinc cyanide 557-31-3, Allyl ethyl ether 557-40-4,
 Diallylether 557-98-2, 2-Chloropropene 558-13-4, Carbon tetrabromide
 563-45-1, 3-Methyl-1-butene 563-46-2, 2-Methyl-1-butene 563-47-3,
 Methyl allyl chloride 563-80-4, 3-Methylbutan-2-one 578-54-1,
 2-Ethylaniline 578-94-9, Diphenylamine chloroarsine 582-61-6, Benzoyl
 azide 583-15-3, Mercury benzoate 584-79-2, Allethrin 585-79-5,
 1-Bromo-3-nitrobenzene 586-62-9, Terpinolene 587-85-9D, compds.
 590-01-2, Butylpropionate 590-36-3, 2-Methylpentan-2-ol 591-27-5,
 m-Aminophenol 591-87-7, Allyl acetate 591-89-9, Mercuric potassium
 cyanide 592-01-8, Calcium cyanide 592-05-2, Lead cyanide (Pb(CN)₂)
 592-34-7, n-Butylchloroformate 592-41-6, 1-Hexene, miscellaneous
 592-55-2, 2-Bromoethyl ethyl ether 592-63-2 592-84-7, n-Butylformate
 593-53-3, Methyl fluoride 593-60-2, Vinyl bromide 593-89-5,
 Methylchloroarsine 594-42-3, Perchloromethylmercaptan 594-72-9,
 1,1-Dichloro-1-nitroethane 598-14-1, Ethyldichloroarsine 598-21-0,
 Bromoacetyl bromide 598-31-2, Bromoacetone 598-57-2, Methyl nitramine
 598-57-2D, Methyl nitramine, metal salts 598-58-3, Methyl nitrate
 598-73-2, Bromotrifluoroethylene 598-78-7, α -Chloropropionic acid
 598-99-2, Methyl trichloroacetate 602-96-0, 1,3,5-Trimethyl-2,4,6-
 trinitrobenzene 602-99-3, Trinitro-m-cresol 602-99-3D, Methyl picric

acid, heavy metal salts 608-50-4, 2,4-Dinitro-1,3,5-trimethylbenzene 610-38-8, 4-Bromo-1,2-dinitrobenzene 616-38-6, Dimethyl carbonate 616-74-0D, 4,6-Dinitroresorcinol, heavy metal salts 617-37-8 617-50-5, Isopropyl isobutyrate 617-89-0, Furfurylamine 619-97-6, Benzene diazonium nitrate 620-05-3, Benzyl iodide 622-44-6, Phenylcarbylamine chloride 622-45-7, Cyclohexyl acetate 623-42-7, Methyl butyrate 623-87-0, Glycerol-1,3-dinitrate 624-61-3, Dibromoacetylene 624-74-8, Diiodoacetylene 624-83-9, Methyl isocyanate 624-91-9, Methyl nitrite 624-92-0, Dimethyl disulfide 625-76-3, Dinitromethane 626-67-5, 1-Methylpiperidine 627-13-4, n-Propyl nitrate 627-30-5 627-63-4, Fumaryl chloride 628-28-4, Butyl methyl ether 628-32-0, Ethyl propyl ether 628-63-7, Amyl acetate 628-81-9, Ethyl butyl ether 628-86-4, Mercury fulminate 628-92-2, Cycloheptene 628-96-6, Ethylene glycol dinitrate 629-13-0, 1,2-Diazidoethane 629-14-1 629-20-9, Cyclooctatetraene 630-08-0, Carbon monoxide, miscellaneous 630-72-8, Trinitroacetoneitrile 637-78-5, Isopropyl propionate 638-11-9, Isopropyl butyrate 638-29-9, Valeryl chloride 638-49-3, Amyl formate 641-16-7, 2,3,4,6-Tetranitrophenol 644-31-5, Acetyl benzoyl peroxide 644-97-3, Phenyl phosphorus dichloride 645-55-6, N-Nitroaniline 646-06-0, Dioxolane 674-81-7, Nitrosoguanidine 674-82-8, Diketene 676-83-5, Methyl phosphonous dichloride 676-97-1, Methyl phosphonic dichloride 676-98-2, Methyl phosphonothioic dichloride 677-71-4, Hexafluoroacetone hydrate 681-84-5, Methyl orthosilicate 684-16-2, Hexafluoroacetone 693-21-0, Diethylene glycol dinitrate 694-05-3, 1,2,3,6-Tetrahydropyridine 757-58-4, Hexaethyl tetraphosphate 762-12-9, Decanoyl peroxide 762-13-0, Pelargonyl peroxide 762-16-3 765-34-4, Glycidaldehyde 766-09-6, 1-Ethylpiperidine 771-29-9, Tetralin hydroperoxide 776-74-9, Diphenylmethyl bromide 814-78-8, Methyl isopropenyl ketone 822-06-0 831-52-7, Sodium picramate 883-40-9, Diazodiphenylmethane 918-37-6, Hexanitroethane 918-54-7, Trinitroethanol 926-63-6 926-64-7, 2-Dimethylaminoacetoneitrile 928-65-4, Hexyltrichlorosilane 929-06-6, 2-(2-Aminoethoxy)ethanol 993-00-0, Methylchlorosilane 993-12-4 993-43-1, Ethyl phosphonothioic dichloride 1002-16-0, Amyl nitrate 1070-19-5, tert-Butoxycarbonyl azide 1120-21-4, Undecane 1125-27-5

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IT 1126-78-9 1187-93-5, Perfluoromethyl vinyl ether 1299-86-1, Aluminum carbide 1300-64-7, Anisoyl chloride 1300-71-6, Xylenol 1300-73-8D, derivs. 1303-28-2, Arsenic pentoxide 1303-33-9, Arsenic sulfide 1303-33-9D, Arsenic sulfide, mixture with chlorates 1304-28-5, Barium oxide, miscellaneous 1304-29-6, Barium peroxide 1305-78-8, Calcium oxide, miscellaneous 1305-79-9, Calcium peroxide 1305-99-3, Calcium phosphide 1309-60-0, Lead dioxide 1310-58-3, Potassium hydroxide, miscellaneous 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, miscellaneous 1310-82-3, Rubidium hydroxide 1312-73-8, Potassium sulfide 1313-60-6, Sodium peroxide 1313-82-2, Sodium sulfide, miscellaneous 1314-18-7, Strontium peroxide 1314-22-3, Zinc peroxide 1314-24-5, Phosphorus trioxide 1314-34-7, Vanadium trioxide 1314-56-3, Phosphorus pentoxide, miscellaneous 1314-62-1, Vanadium pentoxide, miscellaneous 1314-80-3, Phosphorus sulfide (P2S5) 1314-84-7, Zinc phosphide 1314-85-8, Phosphorus sesquisulfide 1319-77-3, Cresylic acid 1320-37-2, Dichlorotetrafluoroethane 1321-10-4, Chlorocresol 1321-31-9, Phenetidine 1327-53-3, Arsenic trioxide 1330-20-7, Xylene, miscellaneous 1330-45-6, Chlorotrifluoroethane 1330-78-5, Tricresyl phosphate 1331-22-2, Methyl cyclohexanone 1332-12-3, Fulminating gold 1332-37-2, Iron oxide,

properties 1333-39-7, Phenolsulfonic acid 1333-41-1, Picoline
 1333-74-0, Hydrogen, miscellaneous 1333-82-0, Chromium trioxide
 1333-83-1, Sodium hydrogen fluoride 1335-26-8, Magnesium peroxide
 1335-31-5, Mercury oxycyanide 1335-85-9, Dinitro-o-cresol 1336-21-6,
 Ammonium hydroxide 1337-81-1 1338-23-4, Methyl ethyl ketone peroxide
 1341-24-8, Chloroacetophenone 1341-49-7, Ammonium hydrogen fluoride
 1344-40-7, Lead phosphite, dibasic 1344-67-8, Copper chloride
 1498-40-4, Ethyl phosphonous dichloride 1498-51-7, Ethyl
 phosphorodichloridate 1569-69-3, Cyclohexyl mercaptan 1609-86-5,
 tert-Butyl **isocyanate** 1623-15-0 1623-24-1, Isopropyl acid
 phosphate 1634-04-4, Methyl-tert-butyl ether 1693-71-6, Triallyl
 borate 1705-60-8, 2,2-Di(4,4-di-tert-butylperoxycyclohexyl)propane
 1712-64-7, Isopropyl nitrate 1719-53-5, Diethyldichlorosilane
 1737-93-5, 3,5-Dichloro-2,4,6-trifluoropyridine 1789-58-8,
 Ethyldichlorosilane 1795-48-8, Isopropyl **isocyanate**
 1838-59-1, Allyl formate 1873-29-6, Isobutyl **isocyanate**
 1885-14-9, Phenylchloroformate 1947-27-9, Arsenic trichloride
 2050-92-2, Di-n-amylamine 2094-98-6, 1,1'-Azodi(hexahydrobenzonitrile)
2144-45-8, Dibenzyl peroxydicarbonate 2155-71-7 2167-23-9,
 2,2-Di(tert-butylperoxy)butane 2217-06-3, Dipicryl sulfide 2243-94-9,
 1,3,5-Trinitronaphthalene 2244-21-5, Potassium dichloroisocyanurate
 2294-47-5, p-Diazidobenzene 2312-76-7 2338-12-7, 5-Nitrobenzotriazole
 2487-90-3, Trimethoxysilane 2508-19-2, Trinitrobenzenesulfonic acid
 2524-03-0, Dimethyl chlorothiophosphate 2524-04-1, Diethylthiophosphoryl
 chloride 2549-51-1, Vinyl chloroacetate 2551-62-4, Sulfur hexafluoride
 2567-83-1, Tetraethylammonium perchlorate 2657-00-3, Sodium
 2-diazo-1-naphthol-5-sulfonate 2691-41-0, Cyclotetramethylenetetranitram
 ine 2696-92-6, Nitrosyl chloride 2699-79-8, Sulfuryl fluoride
 2782-57-2, Dichloroisocyanuric acid 2782-57-2D, Dichloroisocyanuric
 acid, salts 2820-51-1, Nicotine hydrochloride 2825-15-2 2855-13-2,
 Isophoronediamine 2867-47-2, Dimethylaminoethyl methacrylate
 2893-78-9, Sodium dichloroisocyanurate 2937-50-0, Allyl chloroformate
 2941-64-2, Ethyl chlorothioformate 2980-64-5 3025-88-5,
 2,5-Dimethyl-2,5-dihydroperoxy hexane 3031-74-1, Ethyl hydroperoxide
 3032-55-1 3054-95-3, 3,3-Diethoxypropene 3087-37-4,
 Tetrapropylorthotitanate 3129-90-6, Isothiocyanic acid 3129-91-7,
 Dicyclohexylammonium nitrite 3132-64-7, Epibromohydrin 3165-93-3,
 4-Chloro-o-toluidine hydrochloride 3173-53-3, Cyclohexyl
isocyanate 3179-56-4, Acetyl cyclohexanesulfonyl peroxide
 3188-13-4, Chloromethyl ethyl ether 3248-28-0, Dipropionyl peroxide
 3268-49-3 3275-73-8, Nicotine tartrate 3282-30-2, Trimethylacetyl
 chloride 3497-00-5, Phenyl phosphorus thiodichloride 3689-24-5
 3724-65-0, Crotonic acid 3811-04-9, Potassium chlorate 3926-62-3,
 Sodium chloroacetate 3982-91-0, Thiophosphoryl chloride 4016-11-9,
 1,2-Epoxy-3-ethoxypropane 4098-71-9 4109-96-0, Dichlorosilane
 4170-30-3, Crotonaldehyde 4300-97-4 4316-42-1, N-n-Butylimidazole
 4419-11-8, 2,2'-Azodi(2,4-dimethylvaleronitrile) 4421-50-5 4435-53-4,
 Butoxyl 4452-58-8, Sodium percarbonate 4472-06-4, Carbonazidodithioic
 acid 4484-72-4, Dodecyltrichlorosilane 4528-34-1 4547-70-0
 4591-46-2 4682-03-5, Diazodinitrophenol 4795-29-3,
 Tetrahydrofurfurylamine 4904-61-4, 1,5,9-Cyclododecatiene 5283-66-9,
 Octyltrichlorosilane 5283-67-0, Nonyltrichlorosilane 5329-14-6,
 Sulfamic acid 5419-55-6, Triisopropyl borate 5610-59-3, Silver
 fulminate 5637-83-2, Cyanuric triazide 5653-21-4 5894-60-0,
 Hexadecyltrichlorosilane 5970-32-1, Mercury salicylate 6023-29-6
 6275-02-1 6423-43-4 6427-21-0, Methoxymethyl **isocyanate**
 6484-52-2, Nitric acid ammonium salt, properties 6484-52-2D, Ammonium
 nitrate, mixts. with fuel oils 6505-86-8, Nicotine sulfate 6659-60-5,

1,2,4-Butanetriol trinitrate 6842-15-5, Propylene tetramer 7304-92-9
 7332-16-3, Inositol hexanitrate 7429-90-5, Aluminum, miscellaneous
 7429-90-5D, Aluminum, alkyl derivs. 7439-90-9, Krypton, miscellaneous
 7439-92-1D, Lead, compds. 7439-93-2, Lithium, miscellaneous
 7439-93-2D, Lithium, alkyl derivs. 7439-95-4, Magnesium, miscellaneous
 7439-95-4D, Magnesium, alkyl derivs. 7439-97-6, Mercury, miscellaneous
 7439-97-6D, Mercury, compds. 7440-01-9, Neon, miscellaneous 7440-09-7,
 Potassium, miscellaneous 7440-17-7, Rubidium, miscellaneous 7440-21-3,
 Silicon, miscellaneous 7440-23-5, Sodium, miscellaneous 7440-28-0D,
 Thallium, compds. 7440-29-1, Thorium, miscellaneous 7440-31-5D, Tin,
 organic compds. 7440-32-6, Titanium, properties 7440-36-0, Antimony,
 miscellaneous 7440-36-0D, Antimony, inorg. and organic compds. 7440-37-1,
 Argon, miscellaneous 7440-38-2, Arsenic, miscellaneous 7440-39-3,
 Barium, miscellaneous 7440-39-3D, Barium, alloys 7440-39-3D, Barium,
 compds. 7440-41-7, Beryllium, miscellaneous 7440-41-7D, Beryllium,
 compds. 7440-43-9D, Cadmium, compds. 7440-44-0, Carbon, miscellaneous
 7440-45-1, Cerium, miscellaneous 7440-46-2, Cesium, miscellaneous
 7440-55-3, Gallium, miscellaneous 7440-58-6, Hafnium, miscellaneous
 7440-59-7, Helium, miscellaneous 7440-61-1, Uranium, miscellaneous
 7440-63-3, Xenon, miscellaneous 7440-66-6, Zinc, miscellaneous
 7440-67-7, Zirconium, miscellaneous 7440-70-2, Calcium, miscellaneous
 7440-70-2D, Calcium, alloys 7446-09-5, Sulfur dioxide, miscellaneous
 7446-11-9, Sulfur trioxide, miscellaneous 7446-14-2, Lead sulfate
 7446-18-6, Thallium sulfate 7446-70-0, Aluminum chloride (AlCl₃),
 miscellaneous 7487-94-7, Mercuric chloride, miscellaneous 7488-56-4,
 Selenium disulfide 7521-80-4, Butyltrichlorosilane 7550-45-0, Titanium
 tetrachloride, miscellaneous 7570-26-5, 1,2-Dinitroethane 7572-29-4,
 Dichloroacetylene 7578-36-1 7580-67-8, Lithium hydride 7601-89-0,
 Sodium perchlorate 7601-90-3, Perchloric acid, miscellaneous
 7616-94-6, Perchloryl fluoride 7631-89-2, Sodium arsenate 7631-99-4,
 Sodium nitrate, miscellaneous 7632-00-0, Sodium nitrite 7632-51-1,
 Vanadium tetrachloride 7637-07-2, Boron trifluoride, miscellaneous
 7645-25-2, Lead arsenate 7646-69-7, Sodium hydride 7646-78-8, Stannic
 chloride, miscellaneous 7646-85-7, Zinc chloride, miscellaneous
 7646-93-7, Potassium hydrogen sulfate 7647-01-0, Hydrogen chloride,
 miscellaneous 7647-18-9, Antimony pentachloride 7647-19-0, Phosphorus
 pentafluoride

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IT 7664-38-2, Phosphoric acid, miscellaneous 7664-38-2D, Phosphoric acid,
 esters 7664-39-3, Hydrogen fluoride, miscellaneous 7664-41-7, Ammonia,
 miscellaneous 7664-93-9, Sulfuric acid, miscellaneous 7681-38-1,
 Sodium hydrogen sulfate 7681-49-4, Sodium fluoride, miscellaneous
 7681-52-9, Sodium hypochlorite 7697-37-2, Nitric acid, miscellaneous
 7704-34-9, Sulfur, miscellaneous 7705-07-9D, Titanium trichloride,
 mixts. 7705-08-0, Ferric chloride, miscellaneous 7718-98-1, Vanadium
 trichloride 7719-09-7, Thionyl chloride 7719-12-2, Phosphorus
 trichloride 7722-64-7, Potassium permanganate 7722-84-1, Hydrogen
 peroxide (H₂O₂), miscellaneous 7723-14-0, Phosphorus, miscellaneous
 7726-95-6, Bromine, miscellaneous 7727-15-3, Aluminum bromide
 7727-18-6, Vanadium oxytrichloride 7727-21-1, Potassium persulfate
 7727-37-9, Nitrogen, miscellaneous 7727-37-9D, Nitrogen, mixts. with
 rare gases 7727-54-0, Ammonium persulfate 7738-94-5, Chromic acid
 (H₂CrO₄) 7756-94-7, Triisobutylene 7757-79-1, Potassium nitrate,
 miscellaneous 7758-01-2, Potassium bromate 7758-09-0, Potassium
 nitrite 7758-19-2, Sodium chlorite 7758-94-3, Ferrous chloride
 7761-88-8, Silver nitrate, miscellaneous 7773-03-7, Potassium bisulfite

7775-09-9, Sodium chlorate 7775-14-6, Sodium dithionite 7778-39-4,
 Arsenic acid 7778-44-1, Calcium arsenate 7778-54-3, Calcium
 hypochlorite 7778-66-7 7778-74-7, Potassium perchlorate 7779-86-4,
 Zinc dithionite 7779-88-6, Zinc nitrate 7782-39-0, Deuterium,
 miscellaneous 7782-41-4, Fluorine, miscellaneous 7782-44-7, Oxygen,
 miscellaneous 7782-44-7D, Oxygen, mixts. with rare gases 7782-49-2,
 Selenium, miscellaneous 7782-50-5, Chlorine, miscellaneous 7782-65-2,
 Germane 7782-78-7, Nitrosylsulfuric acid 7782-79-8D, Hydrazoic acid,
 copper complexes 7782-99-2, Sulfurous acid, miscellaneous 7783-06-4,
 Hydrogen sulfide, miscellaneous 7783-07-5, Hydrogen selenide (H₂Se)
 7783-08-6, Selenic acid 7783-33-7 7783-41-7, Oxygen difluoride
 7783-54-2, Nitrogen trifluoride 7783-56-4, Antimony trifluoride
 7783-60-0, Sulfur tetrafluoride 7783-61-1, Silicon tetrafluoride
 7783-66-6, Iodine pentafluoride 7783-70-2, Antimony pentafluoride
 7783-79-1, Selenium hexafluoride 7783-80-4, Tellurium hexafluoride
 7783-81-5, Uranium hexafluoride 7783-82-6, Tungsten hexafluoride
 7783-91-7, Silver chlorite 7784-08-9 7784-21-6, Aluminum hydride
 7784-30-7, Aluminum phosphate 7784-42-1, Arsine 7784-46-5, Sodium
 arsenite 7786-30-3D, Magnesium chloride (MgCl₂), mixture with chlorates
 7787-36-2, Barium permanganate 7787-41-9, Barium selenate 7787-71-5,
 Bromine trifluoride 7788-97-8, Chromic fluoride 7789-09-5, Ammonium
 dichromate 7789-18-6, Cesium nitrate 7789-21-1, Fluorosulfonic acid
 7789-23-3, Potassium fluoride 7789-29-9, Potassium bifluoride
 7789-30-2, Bromine pentafluoride 7789-38-0, Sodium bromate 7789-59-5,
 Phosphorus oxybromide 7789-60-8, Phosphorus tribromide 7789-61-9,
 Antimony tribromide 7789-69-7, Phosphorus pentabromide 7789-78-8,
 Calcium hydride 7790-59-2 7790-69-4, Lithium nitrate 7790-91-2,
 Chlorine trifluoride 7790-93-4, Chloric acid 7790-94-5, Chlorosulfonic
 acid 7790-98-9, Ammonium perchlorate 7790-99-0, Iodine monochloride
 7791-10-8, Strontium chlorate 7791-23-3, Selenium oxychloride
 7791-25-5, Sulfuryl chloride 7791-27-7, Disulfuryl chloride 7803-51-2,
 Phosphine 7803-52-3, Stibine 7803-54-5, Magnesium diamide 7803-55-6,
 Ammonium metavanadate 7803-57-8, Hydrazine hydrate 7803-62-5, Silane,
 miscellaneous 7803-63-6, Ammonium hydrogen sulfate 8004-09-9
 8006-19-7, Amatol 8006-28-8, Soda lime 8007-56-5, Nitrohydrochloric
 acid 8007-58-7 8012-74-6, London Purple 8014-95-7, Fuming sulfuric
 acid 8049-17-0, Ferrosilicon 8050-88-2, Celluloid 8063-77-2
 8065-53-0, Hexolite 8066-33-9, Pentolite 8070-50-6 9003-53-6,
 Polystyrene 9004-70-0, Collodion 9056-38-6, Nitrostarch 9080-17-5,
 Ammonium polysulfide 10022-31-8, Barium nitrate 10024-97-2, Nitrogen
 oxide (N₂O), properties 10025-78-2, Trichlorosilane 10025-85-1,
 Nitrogen trichloride 10025-87-3, Phosphorus oxychloride 10025-91-9,
 Antimony trichloride 10026-04-7, Silicon tetrachloride 10026-11-6,
 Zirconium tetrachloride 10026-13-8, Phosphorus pentachloride
 10031-13-7 10031-87-5, 2-Ethylbutyl acetate 10034-81-8, Magnesium
 perchlorate 10034-85-2, Hydrogen iodide 10035-10-6, Hydrogen bromide,
 miscellaneous 10039-54-0, Hydroxylamine sulfate 10042-76-9, Strontium
 nitrate 10045-94-0, Mercuric nitrate 10049-04-4, Chlorine dioxide
 10099-74-8, Lead nitrate 10101-50-5 10102-06-4, Uranyl nitrate
 10102-12-2, Selenium nitride 10102-18-8, Sodium selenite 10102-43-9,
 Nitric oxide, miscellaneous 10102-44-0, Nitrogen dioxide, miscellaneous
 10102-49-5, Ferric arsenate 10102-50-8, Ferrous arsenate 10103-50-1,
 Magnesium arsenate 10118-76-0 10124-37-5, Calcium nitrate
 10124-48-8, Mercury ammonium chloride 10124-50-2, Potassium arsenite
 10137-74-3, Calcium chlorate 10192-29-7, Ammonium chlorate 10241-05-1,
 Molybdenum pentachloride 10256-53-8, Methanamine, compound with
 trinitromethane, miscellaneous 10294-33-4, Boron tribromide
 10294-34-5, Boron trichloride 10306-83-9 10326-21-3, Magnesium

chlorate 10326-24-6 10361-95-2, Zinc chlorate 10377-60-3, Magnesium nitrate 10377-66-9, Manganese nitrate 10415-75-5, Mercurous nitrate 10421-48-4, Ferric nitrate 10431-47-7 10544-63-5, Ethyl crotonate 11069-19-5, Dichlorobutene 11071-47-9, Isooctene 11099-22-2 11105-16-1, Zirconium hydride 11122-26-2 11135-81-2 11138-49-1, Sodium aluminate 11140-68-4, Titanium hydride 12001-29-5, Chrysotile 12002-19-6, Mercury nucleate 12002-48-1, Trichlorobenzene 12030-88-5, Potassium superoxide 12031-80-0, Lithium peroxide 12033-49-7, Nitrogen trioxide 12034-12-7, Sodium superoxide 12057-74-8, Magnesium phosphide (Mg3P2) 12125-01-8, Ammonium fluoride 12135-76-1, Ammonium sulfide 12136-15-1, Mercury nitride 12164-94-2, Ammonium azide 12167-20-3, Nitrocresol 12172-67-7, Actinolite 12401-70-6, Potassium monoxide 12401-86-4, Sodium monoxide 12427-38-2, Maneb 12440-42-5, Tin phosphide (Sn3P4) 12504-16-4, Strontium phosphide (Sr3P2) 12627-52-0, Antimony sulfide 12627-52-0D, Antimony sulfide, mixture with chlorates 12640-89-0, Selenium oxide 12653-71-3, Mercury oxide 12737-18-7, Calcium silicide 12751-03-0, Cordite 12771-08-3, Sulfur chloride 12789-46-7, Amyl acid phosphate 13092-75-6, Silver acetylde 13138-45-9 13225-10-0, α -Methylglucoside tetranitrate 13319-75-0, Boron trifluoride dihydrate 13410-01-0, Sodium selenate 13424-46-9, Lead azide 13426-91-0, Cupriethylenediamine 13437-80-4, Mercuric arsenate 13444-85-4, Nitrogen triiodide 13446-10-1, Ammonium permanganate 13446-48-5, Ammonium nitrite 13450-97-0, Strontium perchlorate 13453-30-0, Thallium chlorate 13463-39-3, Nickel carbonyl 13463-40-6, Iron pentacarbonyl 13464-33-0, Zinc arsenate 13464-58-9D, Arsenous acid, copper complexes 13465-73-1, Bromosilane 13465-95-7, Barium perchlorate 13472-08-7 13473-90-0, Aluminum nitrate 13477-00-4, Barium chlorate 13477-10-6, Barium hypochlorite 13477-36-6, Calcium perchlorate 13520-83-7, Uranyl nitrate hexahydrate 13537-32-1, Fluorophosphoric acid 13548-38-4, Chromium nitrate 13597-54-1, Zinc selenate

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT 13597-99-4, Beryllium nitrate 13598-36-2, Phosphonic acid 13637-63-3, Chlorine pentafluoride 13637-76-8, Lead perchlorate 13718-59-7 13746-89-9, Zirconium nitrate 13762-51-1, Potassium borohydride 13766-44-4, Mercury sulfate 13769-43-2, Potassium metavanadate 13770-96-2, Sodium aluminum hydride 13774-25-9 13779-41-4, Difluorophosphoric acid 13780-03-5, Calcium bisulfite 13823-29-5, Thorium nitrate 13840-33-0, Lithium hypochlorite 13840-33-0D, Lithium hypochlorite, mixts. 13843-59-9, Ammonium bromate 13863-88-2, Silver azide 13967-90-3, Barium bromate 13973-87-0, Bromine azide 13973-88-1, Chlorine azide 13987-01-4, Tripropylene 14014-86-9 14019-91-1, Calcium selenate 14293-73-3 14448-38-5, Hyponitrous acid 14519-07-4, Zinc bromate 14519-17-6, Magnesium bromate 14546-44-2, Hydrazine azide 14567-73-8, Tremolite 14644-61-2, Zirconium sulfate 14666-78-5, Diethylperoxydicarbonate 14674-72-7, Calcium chlorite 14696-82-3, Iodine azide (I(N3)) 14977-61-8 15195-06-9 15245-44-0, Lead trinitroresorcinat 15347-57-6, Lead acetate 15457-98-4 15512-36-4, Calcium dithionite 15545-97-8, 2,2'-Azodi(2,4-dimethyl-4-methoxyvaleronitile) 15598-34-2, Pyridine perchlorate 15718-71-5, Ethylenediamine diperchlorate 15825-70-4, Mannitol hexanitrate 15875-44-2, Methylamine perchlorate 16215-49-9, Di-n-butyl peroxydicarbonate 16229-43-9, Vanadyl sulfate 16339-86-9 16646-35-8 16721-80-5, Sodium hydrosulfide 16753-36-9, Copper acetylde 16853-85-3, Lithium aluminum hydride 16871-71-9, Zinc fluorosilicate 16871-90-2, Potassium fluorosilicate

16872-11-0 16893-85-9, Sodium fluorosilicate 16901-76-1, Thallium
 nitrate 16919-19-0, Ammonium fluorosilicate 16940-66-2, Sodium
 borohydride 16940-81-1, Hexafluorophosphoric acid 16941-12-1,
 Chloroplatinic acid 16949-15-8, Lithium borohydride 16949-65-8,
 Magnesium fluorosilicate 16961-83-4, Fluorosilicic acid 16962-07-5,
 Aluminum borohydride 17014-71-0, Potassium peroxide 17068-78-9,
 Anthophyllite 17462-58-7, sec-Butyl chloroformate 17639-93-9,
 Methyl-2-chloropropionate 17687-37-5, Urea nitrate 17702-41-9,
 Decaborane 17861-62-0 18130-44-4, Titanium sulfate 18414-36-3
 18810-58-7, Barium azide 19159-68-3 19287-45-7, Diborane
 19287-45-7D, Diborane, mixts. 19624-22-7, Pentaborane 20062-22-0
 20236-55-9, Barium styphnate 20600-96-8 20816-12-0, Osmium tetroxide
 20820-44-4 20859-73-8, Aluminum phosphide 21351-79-1, Cesium hydroxide
 (Cs(OH)) 21569-01-7 21723-86-4 21985-87-5, Pentanitroaniline
 22128-62-7, Chloromethylchloroformate 22750-93-2, Ethyl perchlorate
 22751-24-2 22826-61-5 23414-72-4, Zinc permanganate 23745-86-0,
 Potassium fluoroacetate 24167-76-8, Sodium phosphide 24468-13-1,
 2-Ethylhexylchloroformate 24884-69-3 25013-15-4, Vinyl toluene
 25109-57-3 25134-21-8 25136-55-4, Dimethyldioxane 25154-42-1,
 Chlorobutane 25154-54-5, Dinitrobenzene 25155-15-1, Cymene
 25167-20-8, Tetrabromoethane 25167-67-3, Butylene 25167-70-8,
 Diisobutylene 25167-80-0, Chlorophenol 25168-05-2, Chlorotoluene
 25265-68-3, Methyltetrahydrofuran 25321-14-6, Dinitrotoluene
 25322-01-4, Nitropropane 25322-20-7, Tetrachloroethane 25323-30-2,
 Dichloroethylene 25339-56-4, Heptene 25340-17-4, Diethylbenzene
 25377-72-4, n-Amylene 25496-08-6, Fluorotoluene 25497-28-3,
 Difluoroethane 25497-29-4, Chlorodifluoroethane 25513-64-8
 25550-53-2 25550-55-4, Dinitrosobenzene 25550-58-7, Dinitrophenol
 25550-58-7D, Dinitrophenol, salts 25567-67-3, Chlorodinitrobenzene
 25567-68-4, Chloronitrotoluene 25639-42-3, Methylcyclohexanol
 25721-38-4, Lead picrate 25917-35-5, Hexanol 26134-62-3, Lithium
 nitride 26140-60-3D, Terphenyl, halo derivs. 26249-12-7,
 Dibromobenzene 26471-56-7, Dinitroaniline 26471-62-5, Toluene
diisocyanate 26506-47-8, Copper chlorate 26571-79-9
 26618-70-2 26628-22-8, Sodium azide 26638-19-7, Dichloropropane
 26645-10-3 26760-64-5, Isopentene 26762-93-6 26914-02-3, Iodopropane
 26915-12-8, Toluidine 26952-23-8, Dichloropropene 26952-42-1,
 Trinitroaniline 27134-26-5, Chloroaniline 27134-27-6, Dichloroaniline
 27137-85-5, Dichlorophenyltrichlorosilane 27152-57-4 27176-87-0,
 Dodecylbenzenesulfonic acid 27195-67-1, Dimethylcyclohexane 27215-10-7
 27236-46-0, Isohexene 27254-36-0, Nitronaphthalene 27458-20-4,
 Butyltoluene 27978-54-7, Hydrazine perchlorate 27986-95-4
 27987-06-0, Trifluoroethane 28260-61-9, Trinitrochlorobenzene
 28300-74-5, Antimony potassium tartrate 28324-52-9, Pinane hydroperoxide
 28479-22-3 28653-16-9 28679-16-5, **Trimethylhexamethylenediisocyan**
ate 28805-86-9, Butylphenol 29191-52-4, Anisidine 29306-57-8
 29790-52-1, Nicotine salicylate 29903-04-6 29965-97-7, Cyclooctadiene
 30236-29-4, Sucrose octanitrate 30525-89-4, Paraformaldehyde
 30553-04-9, Naphthylthiourea 30586-10-8, Dichloropentane 30586-18-6,
 Pentamethylheptane 31058-64-7 31212-28-9, Nitrobenzenesulfonic acid
 33453-96-2 33864-17-4 34216-34-7, Trimethylcyclohexylamine
 35296-72-1, Butanol 35860-50-5, Trinitrobenzoic acid 35860-51-6,
 Dinitroresorcinol 35884-77-6, Xylyl bromide 36472-34-1, Chloropropene
 37020-93-2, Mercury cyanide (Hg(CN)) 37187-22-7, Acetyl acetone peroxide
 37206-20-5, Methyl isobutyl ketone peroxide 37273-91-9, Metaldehyde
 37320-91-5, Mercury iodide 37368-10-8, Aluminum vanadium oxide
 38139-71-8, Bromide chloride 38232-63-2, Mercurous azide 38483-28-2,
 Methylene glycol dinitrate 39377-49-6, Copper cyanide 39377-56-5, Lead

sulfide 39404-03-0, Magnesium silicide 39409-64-8, TVOPA 39432-81-0
 39455-80-6, Ammonium sodium vanadium oxide 39990-99-3, Lithium acetylde
 ethylenediamine complex 40058-87-5, Isopropyl-2-chloropropionate
 41195-19-1 41587-36-4, Chloronitroaniline 42296-74-2, Hexadiene
 43133-95-5, Methylpentane 50815-73-1 50874-93-6 51006-59-8
 51023-22-4, Trichlorobutene 51064-12-1 51312-23-3, Mercury bromide
 51317-24-9, Lead nitroresorcinat 51325-42-9, Copper selenite
 51845-86-4, Ethyl borate 52181-51-8 53014-37-2, Tetranitroaniline
 53408-91-6, Mercury **thiocyanate** 53422-49-4 53569-62-3
 53839-08-0 53906-68-6 54141-09-2, 1,4,-Butynediol 54413-15-9,
 Tritonal 54727-89-8 54958-71-3 55510-04-8, Dinitroglycoluril
 55810-17-8 56929-36-3 56960-91-9 57607-37-1, Octolite 58164-88-8,
 Antimony lactate 58499-37-9 58933-55-4

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering
 or chemical process); BIOL (Biological study); PROC (Process)
 (packaging and transport of, stds. for)

IT 59753-21-8 59917-23-6 60168-33-4 60616-74-2, Magnesium hydride
 60869-68-3 60999-18-0 61061-91-4 61878-56-6 63085-06-3
 63283-80-7, Dichloroisopropyl ether 63597-41-1, Octadiene 63885-01-8
 63907-41-5 63937-14-4 63938-10-3, Chlorotetrafluoroethane 63988-31-8
 64173-96-2 64973-06-4, Arsenic bromide 66634-68-2 67632-66-0
 68833-55-6, Mercury acetylde (Hg(C₂H)) 68848-64-6 68975-47-3,
 Isoheptene 69523-06-4, Ferrocium 69782-73-6 70027-50-8, Copper
 selenate 70042-58-9, tert-Butylcyclohexylchloroformate 70268-38-1
 70268-40-5 70281-33-3 70288-87-8 70288-89-0 70399-13-2, Lithium
 ferrosilicon 72672-48-1 73506-32-8, Hydrazine selenate 76080-77-8
 77851-23-1 78369-83-2 79869-58-2, Propanethiol 81228-87-7,
 Cyclobutylchloroformate 82280-63-5 83267-52-1 84002-64-2
 87686-42-8 90920-71-1 95332-73-3 98130-51-9 98205-29-9
 100920-70-5 102437-81-0 105185-95-3 105554-30-1 109259-85-0
 118833-38-8 125227-17-0 127795-79-3, Ammonium arsenate 131566-30-8,
 Potassium phosphide 132052-03-0, Pesticide S 134009-81-7, Fulminating
 platinum 134010-02-9, Fulminating silver 134115-62-1 134115-63-2,
 Piperazinedipropylamine 134115-64-3 134115-65-4 134115-66-5
 134115-68-7 134115-69-8 134115-70-1 134115-70-1D, salts
 134115-71-2 134115-72-3 134115-73-4 134115-74-5 134115-75-6
 134115-76-7 134140-03-7 134140-11-7 134170-48-2 134191-17-6,
 Azaurolic acid 134191-62-1 134206-87-4 134206-88-5, Sodium
 chlorate-dinitrotoluene mixture 134206-89-6 134207-07-1 134226-92-9
 134265-01-3 134282-14-7, Ammonium fulminate 134282-15-8 134282-16-9,
 5-Azido-1-hydroxytetrazole 134282-17-0 134282-18-1 134282-19-2
 134282-20-5 134282-21-6 134282-23-8, 1,9-Dinitroxypentamethylene-
 2,4,6,8-tetramine 134282-24-9 134282-25-0 134282-26-1 134282-27-2
 134282-28-3 134282-30-7 134282-30-7D, salts 134282-31-8
 134282-34-1 134282-35-2 134282-37-4 134282-38-5 134282-39-6
 134282-40-9 134282-41-0 134282-42-1, 2,4,6-Trinitrophenyl guanidine
 134282-43-2 134293-21-3 134293-22-4 134293-23-5 134293-24-6,
 2,3,5,6-Tetranitroso-1,4-dinitrobenzene 134309-18-5 134318-55-1
 134318-56-2 134356-41-5 134884-20-1, Aluminum magnesium phosphide
 135072-82-1 135099-37-5 135991-25-2, Galactan trinitrate 135991-28-5
 135991-41-2 135991-57-0

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering
 or chemical process); BIOL (Biological study); PROC (Process)
 (packaging and transport of, stds. for)

IT 78-11-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

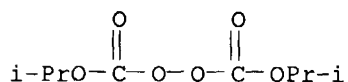
IT 105-64-6, Isopropyl peroxydicarbonate 2144-45-8,

Dibenzyl peroxydicarbonate 14666-78-5, Diethylperoxydicarbonate
16215-49-9, Di-n-butyl peroxydicarbonate

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering
or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

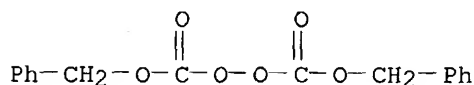
RN 105-64-6 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



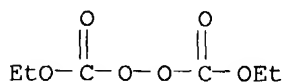
RN 2144-45-8 HCAPLUS

CN Peroxydicarbonic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



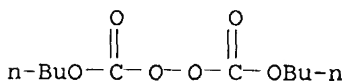
RN 14666-78-5 HCAPLUS

CN Peroxydicarbonic acid, diethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 16215-49-9 HCAPLUS

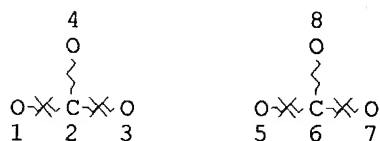
CN Peroxydicarbonic acid, dibutyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



=> => D QUE

L1

STR



NODE ATTRIBUTES:

NSPEC	IS RC	AT	1
NSPEC	IS RC	AT	2
NSPEC	IS RC	AT	3
NSPEC	IS RC	AT	5
NSPEC	IS RC	AT	6

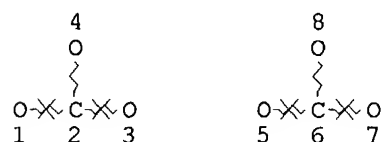
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

NSPEC IS RC AT 7
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L2 14691 SEA FILE=REGISTRY SSS FUL L1
 L4 (67616)SEA FILE=REGISTRY ABB=ON PUR/PCT
 L5 (243)SEA FILE=REGISTRY ABB=ON L4 AND GLYCID?
 L6 (10123)SEA FILE=REGISTRY ABB=ON L4 AND OXIR?
 L7 (299441)SEA FILE=REGISTRY ABB=ON PACR/PCT
 L8 (12801)SEA FILE=REGISTRY ABB=ON L4 AND L7
 L9 (2267)SEA FILE=REGISTRY ABB=ON L8 AND (L6 OR L5)
 L10 (0)SEA FILE=REGISTRY ABB=ON L8 AND SACCHAR?
 L11 (59)SEA FILE=REGISTRY ABB=ON L8 AND LACTON?
 L12 (4081)SEA FILE=REGISTRY ABB=ON 557-75-5/CRN
 L13 (31)SEA FILE=REGISTRY ABB=ON L8 AND L12
 L14 (2346)SEA FILE=REGISTRY ABB=ON L10 OR L11 OR L13 OR L9
 L15 (184348)SEA FILE=REGISTRY ABB=ON 1.30.1/RID
 L16 (2236)SEA FILE=REGISTRY ABB=ON L9 AND L15
 L17 (2346)SEA FILE=REGISTRY ABB=ON L14 OR L16
 L18 (1138)SEA FILE=HCAPLUS ABB=ON L14 OR L17
 L19 (1100)SEA FILE=HCAPLUS ABB=ON L9
 L20 (1)SEA FILE=HCAPLUS ABB=ON L19(L)?SACCHAR?
 L21 (2)SEA FILE=HCAPLUS ABB=ON L19 AND ?SACCHARID?
 L22 (3134)SEA FILE=REGISTRY ABB=ON SACCHARID?
 L23 (286263)SEA FILE=HCAPLUS ABB=ON L22
 L24 (194679)SEA FILE=HCAPLUS ABB=ON ?CARBOHYDRATE?
 L25 (21)SEA FILE=HCAPLUS ABB=ON L18 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC,SX)
 L26 STR



NODE ATTRIBUTES:

NSPEC IS RC AT 1
 NSPEC IS RC AT 2
 NSPEC IS RC AT 3
 NSPEC IS RC AT 5
 NSPEC IS RC AT 6
 NSPEC IS RC AT 7
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L27 (14691)SEA FILE=REGISTRY SSS FUL L26
 L28 (1)SEA FILE=REGISTRY ABB=ON L27 AND (L14 OR L17)

L29 (14)SEA FILE=REGISTRY ABB=ON L27 AND L8
 L30 (1)SEA FILE=HCAPLUS ABB=ON L28
 L31 (11)SEA FILE=HCAPLUS ABB=ON L29
 L32 (12684)SEA FILE=HCAPLUS ABB=ON L27
 L33 (1)SEA FILE=HCAPLUS ABB=ON L25 AND L32
 L34 (5189)SEA FILE=HCAPLUS ABB=ON L8
 L35 (38)SEA FILE=HCAPLUS ABB=ON L32 AND L34
 L36 (38)SEA FILE=HCAPLUS ABB=ON L31 OR L31 OR L35
 L37 (1)SEA FILE=HCAPLUS ABB=ON L36 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC,SX)
 L38 (333)SEA FILE=HCAPLUS ABB=ON L32 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC,SX)
 L39 (2)SEA FILE=HCAPLUS ABB=ON L38 AND (STARCH OR DEXTRIN OR
 GLYCOGEN OR INULIN)
 L40 (9)SEA FILE=HCAPLUS ABB=ON L38 AND (L23 OR L24 OR ?SACCHAR?)
 L41 (10)SEA FILE=HCAPLUS ABB=ON L39 OR L40
 L42 (1)SEA FILE=HCAPLUS ABB=ON L41 AND (?URETHAN? OR ?CYANAT?)
 L43 (2)SEA FILE=HCAPLUS ABB=ON L30 OR L33 OR L37 OR L42
 L44 (0)SEA FILE=HCAPLUS ABB=ON (L20 OR L21) AND (BATTER? OR ELECTROLY
 T? OR ELECTROCHEM?/SC,SX)
 L45 (2)SEA FILE=HCAPLUS ABB=ON L43 OR L44
 L46 (33)SEA FILE=HCAPLUS ABB=ON L32 AND ?PENETRAT?(3A) (NETWORK? OR
 STRUCTURE?)
 L47 (1)SEA FILE=HCAPLUS ABB=ON L46 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC,SX)
 L48 3 SEA FILE=HCAPLUS ABB=ON L45 OR L47
 L49 12684 SEA FILE=HCAPLUS ABB=ON L2
 L50 48 SEA FILE=HCAPLUS ABB=ON L49(L) PLASTICI?
 L51 2 SEA FILE=HCAPLUS ABB=ON L50 AND ELECTROLYT?
 L52 192 SEA FILE=HCAPLUS ABB=ON L49 AND ELECTROLYT?
 L53 2 SEA FILE=HCAPLUS ABB=ON L52 AND ?POLYMER?(3A) (MATRIX OR
 MATRICE?)
 L54 68 SEA FILE=HCAPLUS ABB=ON L52 AND POLYMER?
 L55 34 SEA FILE=HCAPLUS ABB=ON L54 AND (GEL OR GELS OR SOLUTION?)
 L56 29 SEA FILE=HCAPLUS ABB=ON L54 AND SALT#
 L57 16 SEA FILE=HCAPLUS ABB=ON L55 AND L56
 L58 18 SEA FILE=HCAPLUS ABB=ON L51 OR L53 OR L57
 L59 17 SEA FILE=HCAPLUS ABB=ON L58 NOT L48

=> D L59 BIB ABS IND HITSTR 1-17

L59 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:119843 HCAPLUS
 DN 140:149224
 TI Nonaqueous **electrolytic solution** with improved safety
 for lithium battery
 IN Kim, Jun-ho; Lee, Ha-young; Choy, Sang-hoon; Kim, Ho-sung
 PA Samsung SDI Co., Ltd., S. Korea
 SO U.S. Pat. Appl. Publ., 12 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004029018	A1	20040212	US 2003-637554	20030811
	JP 2004079532	A2	20040311	JP 2003-290946	20030808

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

Claim 6
dicarbonates & any polymer

PRAI KR 2002-47510 A 20020812

- AB A nonaq. **electrolytic solution** and a lithium battery employing the same include a lithium **salt**, an organic solvent, and a halogenated benzene compound The use of the nonaq. **electrolytic solution** causes formation of a **polymer** by oxidative decomposition of the **electrolytic solution** even if a sharp voltage increase occurs due to overcharging of the battery, leading to consumption of an overcharge current, thus protecting the battery.
- IC ICM H01M010-40
- NCL 429326000; 429200000; 429340000; 429331000; 429332000
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
- ST lithium battery nonaq **electrolyte soln** improved safety
- IT Esters, uses
Ethers, uses
Hydrocarbons, uses
RL: MOA (Modifier or additive use); USES (Uses)
(C1-20; nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT Aromatic hydrocarbons, uses
RL: MOA (Modifier or additive use); USES (Uses)
(C5-20; nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT Secondary batteries
(lithium; nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT Battery **electrolytes**
(nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT Polyesters, uses
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT Alcohols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polyhydric; nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT 3087-37-4, Tetrapropyltitanate
RL: CAT (Catalyst use); USES (Uses)
(nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT 502-44-3, ϵ -Caprolactone 7439-93-2D, Lithium, **salt**
12190-79-3, Cobalt lithium oxide colio2
RL: DEV (Device component use); USES (Uses)
(nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT 126-58-9DP, Dipentaerythritol, derivative
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(nonaq. **electrolytic solution** with improved safety for lithium battery)
- IT 56-81-5, Glycerol, uses 67-71-0, Methyl sulfone 71-43-2D, Benzene, halogenated 77-77-0, Vinyl sulfone 94-36-0, Benzoylperoxide, uses 96-49-1, Ethylene carbonate 105-64-6, Diisopropyl peroxy dicarbonate 105-74-8, Lauroyl peroxide 108-32-7, Propylene carbonate 115-77-5, Pentaerythritol, uses 126-33-0, Tetramethylene sulfone 126-58-9, DiPentaerythritol 127-63-9, Phenyl sulfone 456-55-3, Trifluoromethyl phenyl ether 462-06-6, Fluorobenzene 620-32-6, Benzyl sulfone 623-53-0, Ethyl methyl carbonate 1561-49-5,

Dicyclohexyl peroxy dicarbonate 1712-87-4, m-Toluoyl peroxide 2972-19-2 3006-82-4, tert-Butylperoxy-2-ethylhexanoate 9002-88-4, Polyethylene 9003-07-0, Polypropylene 14666-78-5 15520-11-3, Bis(4-tert-butylcyclohexyl) peroxydicarbonate 21151-56-4, Benzene, 1-chloro-4-(chloromethoxy)- 21324-40-3, Lithium hexafluorophosphate 28452-93-9, Butadiene sulfone 32752-09-3, Isobutyl peroxide 49717-97-7, 2-Propenoic acid, 2-methyl-, ion(1-) homopolymer, uses 92177-99-6, 3,3,5-Trimethylhexanoylperoxide 651294-25-6 651294-26-7 651294-27-8

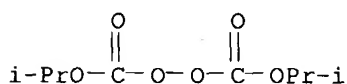
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. **electrolytic solution** with improved safety for lithium battery)

IT 105-64-6, Diisopropyl peroxy dicarbonate 1561-49-5, Dicyclohexyl peroxy dicarbonate 14666-78-5 15520-11-3, Bis(4-tert-butylcyclohexyl) peroxydicarbonate 651294-25-6

RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. **electrolytic solution** with improved safety for lithium battery)

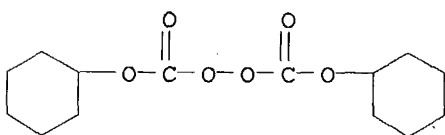
RN 105-64-6 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



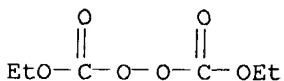
RN 1561-49-5 HCAPLUS

CN Peroxydicarbonic acid, dicyclohexyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



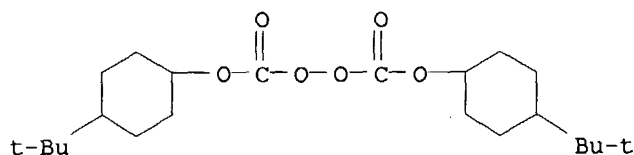
RN 14666-78-5 HCAPLUS

CN Peroxydicarbonic acid, diethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



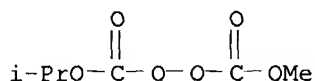
RN 15520-11-3 HCAPLUS

CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI)
(CA INDEX NAME)



RN 651294-25-6 HCAPLUS

CN Peroxydicarbonic acid, methyl 1-methylethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:989967 HCAPLUS

DN 140:29515

TI **Polymer electrolyte** with effective leakage resistance for lithium battery

IN Lee, Kyoung-hee; Kim, Ki-ho

PA Samsung SDI Co., Ltd, S. Korea

SO U.S. Pat. Appl. Publ., 11 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003232240	A1	20031218	US 2003-461489	20030616
	KR 2003097009	A	20031231	KR 2002-34130	20020618
	CN 1479402	A	20040303	CN 2003-152467	20030618
PRAI	KR 2002-34130	A	20020618		

AB A **polymer electrolyte** has improved leakage resistance and a lithium battery uses the **polymer electrolyte**. The **polymer electrolyte** includes a **polymerization** product of a **polymer electrolyte** forming composition that includes a multifunctional acrylate based compound, at least one selected from the group consisting of polyalkylene glycol di(meth)acrylates and polyalkylene glycol (meth)acrylates, and an **electrolytic solution** containing a lithium **salt** and an organic solvent.

IC ICM H01M006-00

NCL 429122000; 429188000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38ST lithium battery **polymer electrolyte** effective leakage resistance

IT Polyoxyalkylenes, uses

RL: DEV (Device component use); USES (Uses)

(acrylate-terminated; **polymer electrolyte** with effective leakage resistance for lithium battery)IT **Polymerization**(irradiation; **polymer electrolyte** with effective leakage resistance for lithium battery)

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- IT Secondary batteries
(lithium; **polymer electrolyte** with effective leakage resistance for lithium battery)
- IT Battery electrolytes
Leak
Polymer electrolytes
Polymerization catalysts
(**polymer electrolyte** with effective leakage resistance for lithium battery)
- IT Carbon fibers, uses
RL: DEV (Device component use); USES (Uses)
(**polymer electrolyte** with effective leakage resistance for lithium battery)
- IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 103-83-3, N-Benzyl dimethylamine 121-44-8, Triethylamine, uses 3087-37-4, Tetrapropyl titanate
RL: CAT (Catalyst use); USES (Uses)
(**polymer electrolyte** with effective leakage resistance for lithium battery)
- IT 126-58-9DP, Dipentaerythritol, derivative, reaction product with acrylic acid and butylcarboxylic acid 126-58-9DP, Dipentaerythritol, with pentyl alc.-substituted terminal hydroxy groups
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(**polymer electrolyte** with effective leakage resistance for lithium battery)
- IT 96-47-9, 2-Methyltetrahydrofuran 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 107-31-3, Methyl formate 108-32-7, Propylene carbonate 109-94-4, Ethyl formate 109-99-9, Thf, uses 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 7791-03-9, Lithium perchlorate 9002-88-4, Polyethylene 9003-07-0, Polypropylene 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 33454-82-9, Lithium triflate 73506-93-1, Diethoxyethane 90076-65-6
RL: DEV (Device component use); USES (Uses)
(**polymer electrolyte** with effective leakage resistance for lithium battery)
- IT 9056-77-3DP, Polyethylene glycol methacrylate, reaction product with dipentaerythritol derivative and acrylic acid and butylcarboxylic acid 25852-47-5DP, Polyethylene glycol dimethacrylate, reaction product with dipentaerythritol derivative and acrylic acid and butylcarboxylic acid
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(**polymer electrolyte** with effective leakage resistance for lithium battery)
- IT 75-91-2, tert-Butyl hydroperoxide 78-63-7, 2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane 78-67-1, Azobisisobutyronitrile 80-15-9, Cumene hydroperoxide 80-43-3, Dicumyl peroxide 94-36-0, Dibenzoyl peroxide, uses 105-64-6, Diisopropyl peroxydicarbonate 105-74-8, Dilauroyl peroxide 110-05-4, Di-tert-butyl peroxide 762-12-9, Didecanoyl peroxide 1561-49-5, Dicyclohexyl peroxy dicarbonate 1712-87-4, m-Toluoyl peroxide 2167-23-9, 2,2-Di-(tert-butylperoxy)butane 2279-96-1, Peroxysuccinic acid 3025-88-5, 2,5-Dihydroperoxy-2,5-dimethylhexane 14666-78-5 15520-11-3, Bis(4-tert-butylcyclohexyl)peroxydicarbonate 15667-10-4, 1,1-Di-(tert-amylperoxy)cyclohexane 16066-38-9, Di(n-propyl)peroxydicarbonate 16111-62-9, Di(2-

ethylhexyl)peroxydicarbonate 19910-65-7, Di(sec-butyl)peroxydicarbonate 25906-27-8 26748-47-0, α -Cumyl peroxyneodecanoate 32752-09-3, Isobutyl peroxide 52373-75-8 55794-20-2, Ethyl 3,3-di-(tert-butylperoxy)butyrate 92177-99-6, 3,3,5-Trimethylhexanoyl peroxide 95732-35-7

RL: CAT (Catalyst use); USES (Uses)

(polymerization initiator; polymer electrolyte with effective leakage resistance for lithium battery)

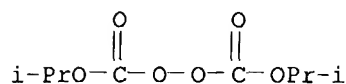
IT 105-64-6, Diisopropyl peroxydicarbonate 1561-49-5, Dicyclohexyl peroxy dicarbonate 14666-78-5 15520-11-3, Bis(4-tert-butylcyclohexyl)peroxydicarbonate 16066-38-9, Di(n-propyl)peroxydicarbonate 16111-62-9, Di(2-ethylhexyl)peroxydicarbonate 19910-65-7, Di(sec-butyl)peroxydicarbonate 52373-75-8

RL: CAT (Catalyst use); USES (Uses)

(polymerization initiator; polymer electrolyte with effective leakage resistance for lithium battery)

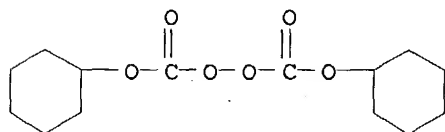
RN 105-64-6 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



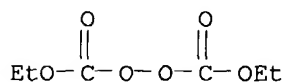
RN 1561-49-5 HCAPLUS

CN Peroxydicarbonic acid, dicyclohexyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



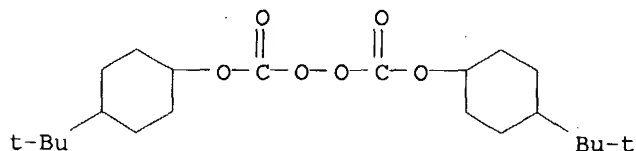
RN 14666-78-5 HCAPLUS

CN Peroxydicarbonic acid, diethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



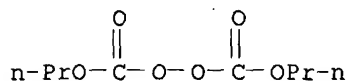
RN 15520-11-3 HCAPLUS

CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI) (CA INDEX NAME)



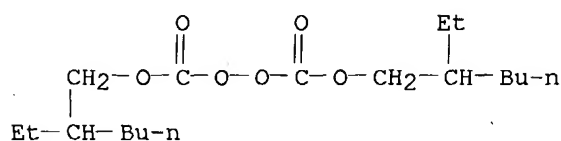
RN 16066-38-9 HCAPLUS

CN Peroxydicarbonic acid, dipropyl ester (8CI, 9CI) (CA INDEX NAME)



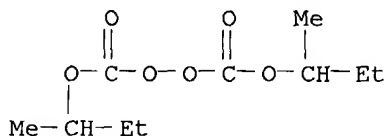
RN 16111-62-9 HCAPLUS

CN Peroxydicarbonic acid, bis(2-ethylhexyl) ester (7CI, 8CI, 9CI) (CA INDEX NAME)



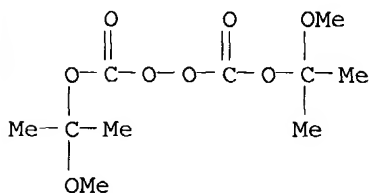
RN 19910-65-7 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methylpropyl) ester (9CI) (CA INDEX NAME)



RN 52373-75-8 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methoxy-1-methylethyl) ester (9CI) (CA INDEX NAME)



L59 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:437466 HCAPLUS

DN 139:263175

TI Characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ -butyrolactone

AU Matsuda, Yoshiharu; Fukushima, Tsuyoshi; Katoh, Yuichi; Ishiko, Eriko; Nishiura, Masahito; Kikuta, Manabu; Kono, Michiyuki

CS Faculty of Engineering, Department of Applied Chemistry, Kansai University, Suita, Osaka, 564-8680, Japan

SO Journal of Power Sources (2003), 119-121, 473-477

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

CODEN: JPSODZ; ISSN: 0378-7753

PB Elsevier Science B.V.

DT Journal

LA English

AB **Gel polymer electrolytes** consisted of poly(alkylene oxide) (PAO), LiBF₄ or LiClO₄, and aprotic solvents (γ-butyrolactone (GBL) and/or ethylene carbonate (EC)) were prepared and the conductivity was measured. The conductivity was very high and similar to that

of the organic liquid **electrolytes**. The performance of Li | **gel polymer electrolyte** | LiCoO₂ cell was measured and compared to that of the cell with the liquid **electrolyte** corresponded. The cell with the **gel electrolyte** showed a decrease of capacity at high-rate discharge and low temperature owing to concentration polarization.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology) Section cross-reference(s): 38, 76

ST alkylene oxide **polymer electrolyte** gamma butyrolactone lithium salt battery; discharge capacity performance **gel electrolyte** lithium concn carbonate

IT Solvents

(aprotic; characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT Battery **electrolytes**

Crosslinking

Gels

Ionic conductivity

Polymer electrolytes

(characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT Polyoxyalkylenes, uses

RL: DEV (Device component use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT Binders

(composite electrode with C and CoLiO₂; characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT **Electrolytic polarization**

(concentration, change with cycling; characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT Secondary batteries

(lithium; characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT 15520-11-3, Bis(4-tert-butylcyclohexyl) peroxydicarbonate

RL: CAT (Catalyst use); USES (Uses)

(characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

IT 7429-90-5, Aluminum, uses

RL: DEV (Device component use); USES (Uses)

(characteristics of **gel** alkylene oxide **polymer electrolytes** containing γ-butyrolactone)

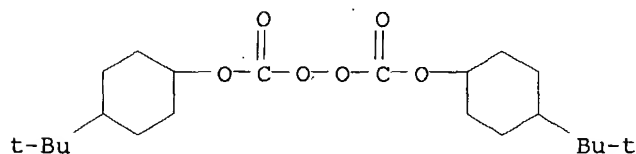
IT 9003-11-6P, Ethylene oxide-propylene oxide copolymer

RL: DEV (Device component use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent);

USES (Uses)

(characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)

- IT 12190-79-3, Cobalt lithium oxide (CoLiO₂)
 RL: DEV (Device component use); USES (Uses)
 (composite electrode with C and binder; characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)
- IT 7440-44-0, Carbon, uses
 RL: DEV (Device component use); USES (Uses)
 (composite electrode with binder and CoLiO₂; characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)
- IT 7439-93-2, Lithium, uses
 RL: DEV (Device component use); USES (Uses)
 (electrode; characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)
- IT 7791-03-9 14283-07-9
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (gels with aprotic solvent and PEO-PPO; characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)
- IT 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (gels with lithium salt and PEO-PPO; characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)
- IT 15520-11-3, Bis(4-tert-butylcyclohexyl) peroxydicarbonate
 RL: CAT (Catalyst use); USES (Uses)
 (characteristics of **gel alkylene oxide polymer electrolytes** containing γ -butyrolactone)
- RN 15520-11-3 HCAPLUS
- CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI)
 (CA INDEX NAME)



RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L59 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:376371 HCAPLUS
 DN 138:387851
 TI Aqueous fracturing fluids for deep water offshore petroleum recovery
 IN Crews, James B.
 PA USA
 SO U.S. Pat. Appl. Publ., 15 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003092584	A1	20030515	US 2002-280635	20021025
	CA 2411559	AA	20030513	CA 2002-2411559	20021112
	NO 2002005421	A	20030514	NO 2002-5421	20021112
	GB 2383597	A1	20030702	GB 2002-26450	20021113
PRAI	US 2001-337714P	P	20011113		
AB	Aqueous fracturing fluids for deep-water (>1000 ft depth) completion fracturing contain a hydratable polymer , a crosslinking agent, a crosslinking delay agent, a gel breaking agent, and two different (i.e., thermodyn. and kinetic-antiagglomerate) natural gas hydrate inhibitors. The hydratable polymers are polysaccharides, such as guar gum and guar gum derivs. (e.g., hydroxypropyl guar, carboxymethyl hydroxypropyl guar gum). Addnl. components include pH buffers, biocides, surfactants, non-emulsifiers, antifoaming agents, scale inhibitors, colorants, and clay control agents. Crosslinking agents include slurried borax suspensions, ulexite, colemanite, and complexes of borate ion, zirconate ion, and titanate ion with polyols selected from sorbitol, mannitol, sodium gluconate, sodium glucoheptonate, glycerol, alpha-D-glucose, fructose, ribose, and alkyl glucosides.				
IC	ICM E21B001-00				
NCL	507200000				
CC	51-2 (Fossil Fuels, Derivatives, and Related Products)				
	Section cross-reference(s): 44				
ST	deep water petroleum fracturing fluid; offshore deep water petroleum fracturing fluid; hydratable polysaccharide offshore petroleum fracturing fluid; natural gas inhibitor petroleum offshore fracturing fluid				
IT	Lactams				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(N-vinyl, polymers , natural gas hydrate inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)				
IT	Sulfonic acids, uses				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(alkanesulfonic, natural gas hydrate inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)				
IT	Glycosides				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(alkyl, natural gas hydrate inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)				
IT	Glycols, uses				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(amino, natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)				
IT	Antifoaming agents				
	Biocides				
	Buffers				
	Crosslinking agents				
	Dyes				
	Scale inhibitors				

Surfactants

(aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Glycols, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(ethers, natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Brines

(formate-containing, natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Well treatment fluids

(fracturing fluids; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Enzymes, processes

RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)

(gel breaking compns.; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Peroxy acids

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(gel breaking compns.; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Ethers, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(glycol, natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Natural gas hydrates

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT **Electrolytes**

(natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Alcohols, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Polysaccharides, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(natural gas hydrate inhibitors and hydratable polymer; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Amides, uses

Amines, uses

Amino acids, uses

Fatty acids, uses

Glycoproteins

Polycarbonates, uses

Proteins

RL: PEP (Physical, engineering or chemical process); PYP (Physical

process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (natural gas hydrate inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Petroleum recovery
 (offshore; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Carboxylic acids, processes
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (peroxy, **gel** breaking compns.; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Alcohols, uses
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polyhydric, natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Lactams
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polylactams, natural gas hydrate inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Vinyl compounds, uses
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (**polymers**, natural gas hydrate inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT Titanates
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polyol complexes, crosslinking agents; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT 70161-44-3, Sodium (hydroxymethyl)glycinate
 RL: NUU (Other use, unclassified); USES (Uses)
 (Integra 44, biocide; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT 55566-30-8, Tetrakis(hydroxymethyl)phosphonium sulfate
 RL: NUU (Other use, unclassified); USES (Uses)
 (Magnacide 575, biocide; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT 10222-01-2, Dibromonitrilopropionamide
 RL: NUU (Other use, unclassified); USES (Uses)
 (X-CIDE 508, biocide; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT 1319-33-1, Ulexite
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (XL 2LW, crosslinking agents; aqueous fracturing fluids for deep water offshore petroleum recovery)

IT 929-59-9, XTJ 504
 RL: NUU (Other use, unclassified); USES (Uses)
 (aqueous fracturing fluids for deep water offshore petroleum recovery)

IT 57-55-6, Propylene glycol, uses 64-17-5, Ethanol, uses

- RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 524946-69-8, BA 5
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(buffer for borate crosslinking agent; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 78-73-9, Choline bicarbonate
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(clay control agent; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 9000-30-0, Guar gum 9004-62-0, Hydroxyethyl cellulose 39421-75-5, Hydroxypropyl guar gum 39454-79-0, Carboxymethyl hydroxypropyl guar gum
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(crosslinkable hydratable **polymer**; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 584-08-7, Potassium carbonate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(crosslinking agent; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 50-69-1D, Ribose, metal ion complexes 50-70-4D, Sorbitol, metal ion complexes 56-81-5D, Glycerol, metal ion complexes 57-48-7D, Fructose, metal ion complexes 69-65-8D, Mannitol, metal ion complexes 492-62-6D, α -D-Glucose, metal ion complexes 527-07-1D, Sodium gluconate, metal ion complexes 1303-96-4, Borax 1318-33-8, Colemanite 14213-97-9D, Borate, polyol complexes 31138-65-5D, Sodium glucoheptonate, metal ion complexes 37200-83-2D, Zirconate, polyol complexes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(crosslinking agents; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 7578-42-9, Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, sodium **salt** 10042-84-9, Nitritotriacetic acid, sodium **salt**
RL: NUU (Other use, unclassified); USES (Uses)
(**gel** breaker; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 3313-92-6, Sodium percarbonate 7758-19-2, Sodium chlorite 15593-29-0, Sodium persulfate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(**gel** breaking agent; aqueous fracturing fluids for deep water offshore petroleum recovery)
- IT 111-76-2, Ethylene glycol monobutyl ether 7447-40-7, Potassium chloride, uses 7647-14-5, Sodium chloride, uses 7786-30-3, Magnesium chloride, uses 10043-52-4, Calcium chloride, uses 524946-71-2, Inhibex 101
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(natural gas hydrate inhibitor; aqueous fracturing fluids for deep water

offshore petroleum recovery)
 IT 79-10-7D, Acrylic acid, **polymers** 616-45-5D, 2-Pyrrolidinone, **polymers** 13598-36-2D, Phosphonic acid, alkyl derivs. 25189-83-7, Poly(vinylcaprolactam) 500226-95-9, AG 6206
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (natural gas hydrate inhibitors; aqueous fracturing fluids for deep water offshore petroleum recovery)
 IT 524946-70-1, STIM 440
 RL: NUU (Other use, unclassified); USES (Uses)
 (non-emulsifier; aqueous fracturing fluids for deep water offshore petroleum recovery)
 IT 524947-44-2, NE 200E
 RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
 (non-emulsifier; aqueous fracturing fluids for deep water offshore petroleum recovery)
 IT 2550-02-9, Si-203
 RL: NUU (Other use, unclassified); USES (Uses)
 (scale inhibitor; aqueous fracturing fluids for deep water offshore petroleum recovery)
 IT 3313-92-6, Sodium percarbonate
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (gel breaking agent; aqueous fracturing fluids for deep water offshore petroleum recovery)
 RN 3313-92-6 HCAPLUS
 CN Peroxydicarbonic acid, disodium salt (8CI, 9CI) (CA INDEX NAME)

HO₂C-O-O-CO₂H

●2 Na

L59 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:110896 HCAPLUS

DN 138:173299

TI Glycerin dicarbonate derivative for nonaqueous-electrolyte solution and polymer electrolyte in battery

IN Fujinami, Tatsuo; Mehta, Mary Anne

PA Toyota Motor Corp., Japan; Konpon Kenkyusho K. K.

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

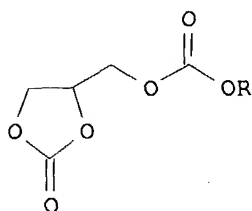
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003040885	A2	20030213	JP 2001-228311	20010727
PRAI	JP 2001-228311		20010727		
OS	MARPAT 138:173299				
GI					

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505



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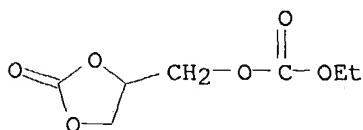
- AB The title glycerin dicarbonate derivative is represented as I (R = C1-6 alkyl, halogenated alkyl, allyl). The nonaq.-**electrolyte soln** comprises an **electrolyte salt** dissolved in the above derivative. The **polymer electrolyte** comprises the derivative and an **electrolyte salt** added into a host **polymer**. A battery equipped with the **solution** or the **polymer electrolyte** provides stable electrode-**electrolyte** interface.
- IC ICM C07D317-38
ICS H01B001-06; H01B001-12; H01M010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
- ST glycerin dicarbonate deriv nonaq **electrolyte** battery;
polymer electrolyte glycerin dicarbonate deriv battery
- IT Battery **electrolytes**
Polymer electrolytes
(glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)
- IT Polyoxyalkylenes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(lithium complexes; glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)
- IT Secondary batteries
(lithium; glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)
- IT 21324-40-3, Lithium hexafluorophosphate 33454-82-9, Lithium triflate 90076-65-6, LiTFSI
RL: TEM (Technical or engineered material use); USES (Uses)
(**electrolyte** containing; glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)
- IT 103924-88-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)
- IT 7439-93-2D, Lithium, **polymer** complexes 9011-14-7D, Poly(methyl methacrylate), lithium complexes 25322-68-3D, lithium complexes
RL: TEM (Technical or engineered material use); USES (Uses)
(glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)
- IT 56-81-5, Glycerin, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with di-Et carbonate; glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)

IT 105-58-8, Diethyl carbonate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with glycerin; glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)

IT 103924-88-5P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (glycerin dicarbonate derivative for nonaq.-**electrolyte solution** and **polymer electrolyte** in battery)

RN 103924-88-5 HCAPLUS
 CN Carbonic acid, ethyl (2-oxo-1,3-dioxolan-4-yl)methyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:40437 HCAPLUS

DN 138:109577

TI Solid secondary lithium battery

IN Ogata, Naoya; Sata, Tsutomu

PA Torekion K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003017121	A2	20030117	JP 2001-200782	20010702
PRAI	JP 2001-200782		20010702		

AB The battery has a Li or Li-intercalating anode, a Li-intercalating cathode, and a solid **electrolyte** in between; where the **electrolyte** is a **solution** containing a Li **salt** in a room temperature solid aromatic carbonate. Another type of the battery has a solid

polymer electrolyte containing a crosslinked polyether **polymer matrix** and the above **solution** as continuous phase in the matrix.

IC ICM H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

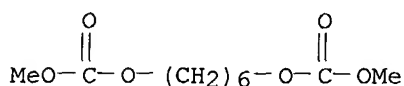
ST secondary Li battery **polymer polyether solid carbonate electrolyte**

IT Secondary batteries

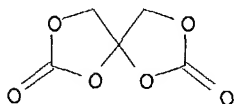
(lithium; compns. and structure of secondary Li batteries containing Li-intercalating electrodes and solid **polymer electrolyte** solns.)

IT 7782-42-5, Graphite, uses 12031-95-7, Lithium titanium oxide (Li4Ti5O12)

- RL: DEV (Device component use); USES (Uses)
(anode; compns. and structure of secondary Li batteries containing
Li-intercalating electrodes and solid **polymer**
electrolyte solns.)
- IT 12190-79-3, Cobalt lithium oxide (CoLiO₂) 15365-14-7, Iron lithium
phosphate (LiFePO₄)
RL: DEV (Device component use); USES (Uses)
(cathode; compns. and structure of secondary Li batteries containing
Li-intercalating electrodes and solid **polymer**
electrolyte solns.)
- IT 79-10-7D, Acrylic acid, polyoxyalkylene derivs. 115383-11-4
RL: DEV (Device component use); USES (Uses)
(compns. and structure of secondary Li batteries containing
Li-intercalating electrodes and solid **polymer**
electrolyte solns.)
- IT 82113-65-3, Bis(trifluoromethane sulfonyl) imide 90076-65-6
RL: DEV (Device component use); USES (Uses)
(salt, **electrolyte**; compns. and structure of
secondary Li batteries containing Li-intercalating electrodes and solid
polymer electrolyte solns.)
- IT 6222-20-4 486459-47-6
RL: DEV (Device component use); USES (Uses)
(solvent, **electrolyte**; compns. and structure of secondary Li
batteries containing Li-intercalating electrodes and solid **polymer**
electrolyte solns.)
- IT 6222-20-4 486459-47-6
RL: DEV (Device component use); USES (Uses)
(solvent, **electrolyte**; compns. and structure of secondary Li
batteries containing Li-intercalating electrodes and solid **polymer**
electrolyte solns.)
- RN 6222-20-4 HCAPLUS
CN Carbonic acid, 1,6 hexanediyl dimethyl ester (9CI) (CA INDEX NAME)



- RN 486459-47-6 HCAPLUS
CN 1,3,6,8-Tetraoxaspiro[4.4]nonane-2,7-dione (9CI) (CA INDEX NAME)



- L59 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:5305 HCAPLUS
DN 138:42077
TI Preparation of **polymer electrolyte** with good ionic
conductivity at room temperature and good mechanical properties for
lithium battery
IN Lee, Kyoung-hee; Kim, Ki-ho
PA S. Korea

SO U.S. Pat. Appl. Publ., 11 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003003368	A1	20030102	US 2002-136431	20020502
	KR 2002084614	A	20021109	KR 2001-24041	20010503
	JP 2003017129	A2	20030117	JP 2002-130108	20020501
	CN 1388172	A	20030101	CN 2002-121519	20020503
PRAI	KR 2001-24041	A	20010503		

AB A **polymer electrolyte** is formed by curing a composition prepared by mixing a **polymer** of compds. of polyethylene glycol di(meth)acrylates and/or multifunctional ethylene oxides; one selected from a vinylacetate monomer, a (meth)acrylate monomer, and a mixture of a vinyl acetate monomer and a (meth)acrylate monomer; and an **electrolytic solution** containing a lithium salt and an organic solvent.

IC ICM H01M010-40

ICS H01M010-04

NCL 429303000; 429317000; 429307000; 429254000; 429144000; 029623100; 429324000; 429094000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38ST lithium battery **polymer electrolyte** prepn

IT Secondary batteries

(lithium; preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties for lithium battery)

IT Battery **electrolytes**Casting of **polymeric** materials

Crosslinking catalysts

Polymer electrolytes

Secondary battery separators

(preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties for lithium battery)

IT Amines, uses

RL: CAT (Catalyst use); USES (Uses)

(preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties for lithium battery)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate for casting; preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties

for

lithium battery)

IT 75-91-2, tert-Butyl hydroperoxide 78-63-7, 2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane 78-67-1, Azobisisobutyronitrile 80-15-9, Cumene hydroperoxide 80-43-3, Dicumyl peroxide 94-36-0, Dibenzoyl peroxide, processes 105-74-8, Dilauroyl peroxide 110-05-4, Di-tert-butyl peroxide 123-23-9, Succinic acid peroxide 762-12-9, Didecanoyl peroxide 927-07-1, tert-Butylperoxy pivalate 2167-23-9, 2,2-Di-(tert-butylperoxy)butane 3025-88-5, 2,5-Dihydroperoxy-2,5-dimethylhexane 4511-39-1, tert-Amylperoxy benzoate 15667-10-4, 1,1-Di-(tert-amylperoxy)cyclohexane 16066-38-9,

Di(n-propyl)peroxydicarbonate 16111-62-9, Di(2-ethylhexyl)peroxydicarbonate 19910-65-7, Di(sec-butyl)peroxydicarbonate 26748-47-0, α -Cumyl peroxy neodecanoate 55794-20-2 95732-35-7

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(curing initiator; preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties

for

lithium battery)

IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 103-83-3, n-Benzyl dimethylamine 121-44-8, Triethyl amine, uses

RL: CAT (Catalyst use); USES (Uses)

(preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties for lithium

battery)

IT 96-47-9, 2-Methyltetrahydrofuran 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 107-31-3, Methyl formate 108-32-7, Propylene carbonate 109-94-4, Ethyl formate 109-99-9, Thf, uses 616-38-6, Dimethyl carbonate 623-53-0, Methyl ethyl carbonate 7791-03-9, Lithium perchlorate 9002-88-4, Polyethylene 9003-07-0, Polypropylene 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 33454-82-9, Lithium triflate 73506-93-1, Diethoxyethane

RL: DEV (Device component use); USES (Uses)

(preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties for lithium

battery)

IT 80-62-6DP, Methylmethacrylate, **polymers** with vinyl acetate and isoerythritol diether esters 108-05-4DP, Vinyl acetate, **polymers** with Me methacrylate and isoerythritol diether esters 27015-60-7P, Ethylene glycol dimethacrylate-vinyl acetate copolymer 60712-37-ODP, esters with acrylate and 6-hydroxyhexanoate, **polymers** containing vinyl acetate and Me methacrylate 95877-34-2P, Ethylene glycol dimethacrylate-methyl methacrylate-vinyl acetate copolymer

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties for lithium

battery)

IT 9002-84-0, Teflon

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate for casting; preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties

for

lithium battery)

IT 16066-38-9, Di(n-propyl)peroxydicarbonate 16111-62-9, Di(2-ethylhexyl)peroxydicarbonate 19910-65-7,

Di(sec-butyl)peroxydicarbonate

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

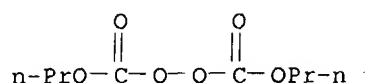
(curing initiator; preparation of **polymer electrolyte** with good ionic conductivity at room temperature and good mech. properties

for

lithium battery)

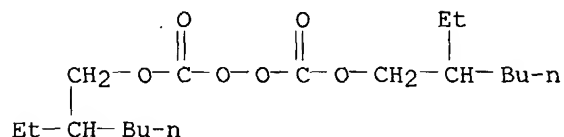
RN 16066-38-9 HCAPLUS

CN Peroxydicarbonic acid, dipropyl ester (8CI, 9CI) (CA INDEX NAME)



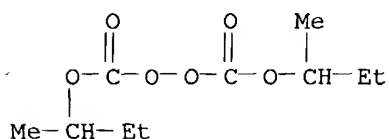
RN 16111-62-9 HCAPLUS

CN Peroxydicarbonic acid, bis(2-ethylhexyl) ester (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 19910-65-7 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methylpropyl) ester (9CI) (CA INDEX NAME)



L59 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:868016 HCAPLUS

DN 136:9079

TI Solid or **gel electrolyte** for battery

IN Keduka, Koichiro; Endo, Takahiro

PA Sony Corporation, Japan

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1158592	A2	20011128	EP 2001-112019	20010523
	EP 1158592	A3	20030903		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001332304	A2	20011130	JP 2000-152473	20000524
	US 2002031710	A1	20020314	US 2001-862621	20010522
	<u>US 6699622</u>	B2	20040302		
	TW 518791	B	20030121	TW 2001-90112256	20010522
	CN 1325147	A	20011205	CN 2001-122180	20010524
PRAI	JP 2000-152473	A	20000524		

AB Disclosed is an **electrolyte** capable of obtaining an excellent quality of **electrolyte**, and a battery using the **electrolyte**. A battery device in which a pos. electrode and a neg. electrode are stacked with a separator being interposed there between is enclosed inside an exterior member. The separator is impregnated with

an **electrolyte**. The **electrolyte** contains a high **polymer**, a plasticizer, a lithium and at least either carboxylic acid or carboxylate. Therefore, when preparing a high **polymer** by means of **polymerization** of monomers, the **polymerization** of monomers can be smoothly processed even if there is a factor for inhibiting reaction such as copper. As a result, the amount of non-reacted monomers remained in the **electrolyte** can be suppressed to be extremely small. Therefore, decomposition and reaction of monomers are suppressed even after repeating charging/discharging, so that the deterioration in the charging/discharging efficiency and the charging/discharging characteristic can be prevented.

- IC ICM H01M010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
- ST battery solid **gel electrolyte**
- IT Carboxylic acids, uses
RL: DEV (Device component use); USES (Uses)
(alkaline earth **salts**; solid or **gel electrolyte** for battery)
- IT Carboxylic acids, uses
RL: DEV (Device component use); USES (Uses)
(alkali metal **salts**; solid or **gel electrolyte** for battery)
- IT Carboxylic acids, uses
RL: DEV (Device component use); USES (Uses)
(aromatic; solid or **gel electrolyte** for battery)
- IT Fluoropolymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; solid or **gel electrolyte** for battery)
- IT Alkaline earth **salts**
RL: DEV (Device component use); USES (Uses)
(carboxylates; solid or **gel electrolyte** for battery)
- IT Secondary batteries
(lithium; solid or **gel electrolyte** for battery)
- IT Battery **electrolytes**
Plasticizers
(solid or **gel electrolyte** for battery)
- IT Carbonaceous materials (technological products)
Carboxylic acids, uses
RL: DEV (Device component use); USES (Uses)
(solid or **gel electrolyte** for battery)
- IT 24937-79-9, Polyvinylidene fluoride
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; solid or **gel electrolyte** for battery)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7,
Propylene carbonate
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer; solid or **gel electrolyte** for battery)
- IT 57-10-3, Palmitic acid, uses 57-11-4, Stearic acid, uses 64-18-6,
Formic acid, uses 64-19-7, Acetic acid, uses 65-85-0, Benzoic acid,
uses 100-21-0, Terephthalic acid, uses 107-92-6, Butyric acid, uses
124-04-9, Adipic acid, uses 124-07-2, Octanoic acid, uses 141-82-2,
Malonic acid, uses 142-62-1, Hexanoic acid, uses 142-72-3, Magnesium
acetate 143-07-7, Lauric acid, uses 144-62-7, Oxalic acid, uses
334-48-5, Decanoic acid 335-67-1, Perfluoro-n-octanoic acid 335-67-1D,
salts 544-63-8, Myristic acid, uses 546-89-4, Lithium acetate
547-66-0, Magnesium oxalate 553-54-8, Lithium benzoate 553-70-8,

Magnesium benzoate 553-91-3, Lithium oxalate 556-63-8, Lithium formate 557-04-0, Magnesium stearate 557-39-1, Magnesium formate 3386-57-0, Magnesium octanoate 4485-12-5, Lithium stearate 7429-90-5, Aluminum, uses 7439-93-2D, Lithium, alkylmonocarboxylate 7440-50-8, Copper, uses 7486-39-7, Magnesium adipate 7782-42-5, Graphite, uses 9003-07-0, Polypropylene 16577-52-9, Lithium octanoate 17125-58-5 18621-94-8, Lithium adipate 21324-40-3, Lithium hexafluorophosphate 28313-49-7, Lithium terephthalate 29126-49-6 30687-87-7, Magnesium terephthalate 54587-61-0, Magnesium malonate 64022-33-9 376354-29-9

RL: DEV (Device component use); USES (Uses)

(solid or **gel electrolyte** for battery)

IT 7439-93-2, Lithium, uses

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(solid or **gel electrolyte** for battery)

IT 12190-79-3P, Cobalt lithium oxide colio2

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(solid or **gel electrolyte** for battery)

IT 15520-11-3, Bis(4-tert-butylcyclohexyl) peroxydicarbonate

RL: RCT (Reactant); RACT (Reactant or reagent)

(solid or **gel electrolyte** for battery)

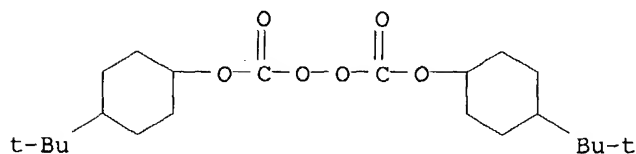
IT 15520-11-3, Bis(4-tert-butylcyclohexyl) peroxydicarbonate

RL: RCT (Reactant); RACT (Reactant or reagent)

(solid or **gel electrolyte** for battery)

RN 15520-11-3 HCAPLUS

CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI)
(CA INDEX NAME)



L59 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:531594 HCAPLUS

DN 133:122779

TI Fabrication and use of crosslinked **polymer** film for a separator of electrochemical apparatus

IN Takeuchi, Masataka; Naijo, Shuichi; Ohkubo, Takashi

PA Showa Denko K. K., Japan

SO U.S., 33 pp., Cont.-in-part of U.S. Ser. No. 723,251, abandoned.

CODEN: USXXAM

DT Patent

LA English

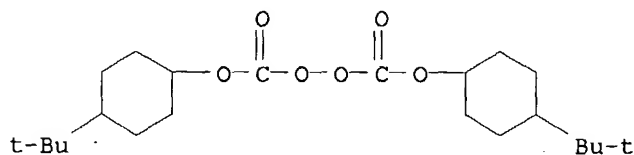
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6096456	A	20000801	US 1997-934902	19970922
	JP 09153354	A2	19970610	JP 1996-253082	19960925
PRAI	JP 1995-253957	A	19950929		
	US 1996-14568P	P	19960401		
	US 1996-723251	B2	19960930		

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

- AB This invention provides a film comprising a crosslinked **polymer** having an oxyalkylene group or a crosslinked **polymer** having an oxyalkylene group through a urethane bond, as a constituent component, a production method of the film, and an electrochem. apparatus using the film as
- a separator. The film for separator of an electrochem. apparatus can be easily and uniformly processed, can include an **electrolytic solution**, exhibits good film thickness and ensures excellent safety and reliability. The electrochem. apparatus is free of leakage of the **solution**
- IC ICM H01M002-16
- NCL 429249000
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 35, 38, 76
- ST battery separator crosslinked **polymer** film; capacitor separator crosslinked **polymer** film; safety separator crosslinked **polymer** film
- IT Capacitors
(double layer; fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Polyolefin fibers
RL: TEM (Technical or engineered material use); USES (Uses)
(ethylene, net; fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Secondary battery separators
(fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Alkali metal **salts**
Phosphonium compounds
Polyurethanes, uses
Quaternary ammonium compounds, uses
RL: DEV (Device component use); USES (Uses)
(fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Secondary batteries
(lithium; fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Polypropene fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(nonwoven fabric; fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(polyoxyalkylene-; fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT Lithium alloy
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(fabrication and use of crosslinked **polymer** film for separator of electrochem. apparatus)
- IT 7440-44-0P, Activated carbon, uses
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(activated; fabrication and use of crosslinked **polymer** film

- for separator of electrochem. apparatus)
- IT 429-06-1, Tetraethylammonium tetrafluoroborate 7782-42-5, Graphite, uses
11107-04-3, Sus 316 14283-07-9, Lithium tetrafluoroborate
RL: DEV (Device component use); USES (Uses)
(fabrication and use of crosslinked **polymer** film for
separator of electrochem. apparatus)
- IT 7439-93-2, Lithium, uses
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PROC (Process); USES (Uses)
(fabrication and use of crosslinked **polymer** film for
separator of electrochem. apparatus)
- IT 12190-79-3P, Cobalt lithium oxide colio2 152707-38-5P 196618-28-7P
196618-29-8P 196965-51-2P 285562-14-3P 285562-15-4P 285562-16-5P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)
(fabrication and use of crosslinked **polymer** film for
separator of electrochem. apparatus)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 2926-30-9,
Sodium triflate
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(fabrication and use of crosslinked **polymer** film for
separator of electrochem. apparatus)
- IT 78-67-1 7473-98-5, Darocur 1173 9003-07-0, Polypropylene
15520-11-3, Bis(4-tert-butylcyclohexyl)peroxy dicarbonate
24650-42-8, Irgacure 651 25038-59-9, Polyethylene terephthalate, uses
285562-13-2, Micropearl SP 213
RL: TEM (Technical or engineered material use); USES (Uses)
(fabrication and use of crosslinked **polymer** film for
separator of electrochem. apparatus)
- IT 1344-28-1, Alumina, uses 7631-86-9, Silica, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(granular support; fabrication and use of crosslinked **polymer**
film for separator of electrochem. apparatus)
- IT **15520-11-3**, Bis(4-tert-butylcyclohexyl)peroxy dicarbonate
RL: TEM (Technical or engineered material use); USES (Uses)
(fabrication and use of crosslinked **polymer** film for
separator of electrochem. apparatus)
- RN 15520-11-3 HCAPLUS
- CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI)
(CA INDEX NAME)



RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L59 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:618474 HCAPLUS

DN 129:303004

TI Alkylene oxide oligomer possessing chain-like carbonate ester group and

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

manufacture thereof

IN Terahara, Atsushi; Iwasaki, Katsuhiko; Sakano, Fumihiro

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10251401	A2	<u>19980922</u>	JP 1997-52904	19970307
PRAI	JP 1997-52904		19970307		

AB The the oligomer useful as **electrolytes** and plasticizers for Li battery is manufactured by reacting an HO-terminated alkylene oxide oligomer with a carbonate diester in the presence of alkali catalysts. Heating 48.1 g 2-(2-methoxyethoxy)ethanol, 94.5 g di-Et carbonate, and 40 mg NaOEt at 100° while stripping of EtOH gave 29.7 g colorless Me(OCH₂CH₂)₂OC(O)OEt with b.p. (0.6 mmHg) 85°, which showed higher b.p. and sp. dielec. ratio than di-Me carbonate-type compound

IC ICM C08G065-32

ICS C07C068-06; C07C069-96; H01M006-18; H01M010-40

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 23, 52

ST alkylene oxide oligomer carbonate ester plasticizer; diethyl carbonate methoxyethoxyethanol reaction

IT Plasticizers

Polyelectrolytes

Transesterification catalysts

(alkylene oxide oligomer possessing chain-like carbonate ester group for **electrolytes** and plasticizers)

IT Polyoxyalkylenes, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(oligomers, carbonate ester; alkylene oxide oligomer possessing chain-like carbonate ester group for **electrolytes** and plasticizers)

IT 141-52-6, Sodium ethoxide

RL: CAT (Catalyst use); USES (Uses)

(alkylene oxide oligomer possessing chain-like carbonate ester group for **electrolytes** and plasticizers)

IT 6947-11-1P 29536-36-5P 29536-37-6P 214470-03-8P

214470-04-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkylene oxide oligomer possessing chain-like carbonate ester group for **electrolytes** and plasticizers)

IT 112-35-6, 2-(2-(2-Methoxyethoxy)ethoxy)ethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(alkylene oxide oligomer possessing chain-like carbonate ester group for **electrolytes** and plasticizers)

IT 105-58-8, Diethyl carbonate 111-46-6, reactions 111-77-3,

2-(2-Methoxyethoxy)ethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant; alkylene oxide oligomer possessing chain-like carbonate ester group for **electrolytes** and plasticizers)

IT 6947-11-1P

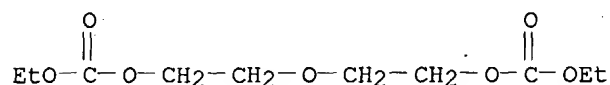
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkylene oxide oligomer possessing chain-like carbonate ester group

for electrolytes and plasticizers)

RN 6947-11-1 HCAPLUS

CN 2,5,8,10-Tetraoxadodecanoic acid, 9-oxo-, ethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:732370 HCAPLUS

DN 128:35554

TI Allyl carbonate copolymers, their manufacture, and **polymeric solid electrolytes**

IN Watanabe, Masayoshi; Yokoyama, Keiichi; Sasano, Takako

PA Mitsui Petrochemical Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 09291123	A2	19971111	JP 1996-107346	19960426
	US 5977277	A	19991102	US 1997-845434	19970425
PRAI	JP 1995-215058	A	19950823		
	JP 1995-215059	A	19950823		
	JP 1995-231864	A	19950908		
	JP 1995-231865	A	19950908		
	JP 1995-290192	A	19951108		
	JP 1995-290193	A	19951108		
	JP 1996-107346	A	19960426		

AB Tilte copolymer contain units derived from $\text{CH}_2:\text{CR}_1\text{CH}_2\text{OCOO}(\text{CR}_2\text{CH}_2\text{O})_n\text{COOCH}_2\text{CR}_3$: CH_2 (I; R_1 -3 = H, Me; n = 1-20) and units derived from $\text{CH}_2:\text{CR}_4\text{OCOO}\text{R}_5$ (II; R_4 = H, Me; R_5 = C1-4 alkyl, $\text{CH}_2\text{CR}_6:\text{CH}_2$; R_6 = H, Me). The copolymers are manufactured by **polymerizing** I with II in the presence of diisopropyl peroxydicarbonate (III). **Polymeric** solid hydrolytes, useful for primary batteries, secondary batteries, condensers, etc., comprise the copolymers (as matrixes) and alkali metal **salts** and optionally further contain nonaq. solvents to form **gels**. Thus, 1.0 g diethylene glycol diallyl dicarbonate was **polymerized** with 11.0 g allyl Me carbonate in the presence of 1.4 g III and 0.6 g $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ and then cure to show ion conductivity 2.3×10^{-7} S/cm at 100° and 8.4×10^{-8} S/cm at 80° .

IC ICM C08F218-00

ICS C08F290-06; C08K003-24; C08L031-00

CC 37-6 (Plastics Manufacture and Processing)

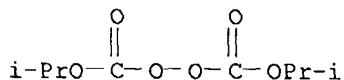
Section cross-reference(s): 35

ST allyl carbonate copolymer **polymeric solid electrolyte**;
alkali metal allyl carbonate copolymer **electrolyte**; diisopropyl
preoxydicarbonate **polymn** catalyst allyl carbonate

IT **Polymerization** catalystsSolid **electrolytes**

(**polymeric solid electrolytes** containing allyl
carbonate copolymers, alkali metal **salts**, and optionally

- nonaq. solvents)
- IT Polycarbonates, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- IT Alkali metal salts
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- IT 105-64-6, Diisopropyl peroxydicarbonate
 RL: CAT (Catalyst use); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- IT 188779-82-0P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- IT 90076-65-6, Lithium bis(trifluoromethylsulfonyl)imide
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (solvents; polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- IT 105-64-6, Diisopropyl peroxydicarbonate
 RL: CAT (Catalyst use); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- RN 105-64-6 HCAPLUS
- CN Peroxydicarbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



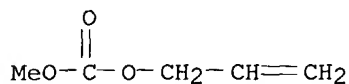
- IT 188779-82-0P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymeric solid electrolytes containing allyl carbonate copolymers, alkali metal salts, and optionally nonaq. solvents)
- RN 188779-82-0 HCAPLUS
- CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer

with methyl 2-propenyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 35466-83-2

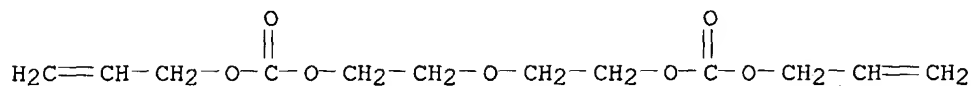
CMF C5 H8 O3



CM 2

CRN 142-22-3

CMF C12 H18 O7



L59 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:716434 HCAPLUS

DN 125:331763

TI Siloxane-based coating composition, process for producing antireflective coatings, and coated articles

IN Li, Huawen; Wang, Alan E.; Das, Suryya K.

PA PPG Industries, Inc., USA

SO PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9629154	A1	19960926	WO 1996-US3605	19960314
	W: AU, BR, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5580819	A	19961203	US 1995-408438	19950322
	AU 9650944	A1	19961008	AU 1996-50944	19960314
	US 5744243	A	19980428	US 1996-709799	19960910
PRAI	US 1995-408438		19950322		
	WO 1996-US3605		19960314		
AB	A composition for producing durable coatings comprises acid-catalyzed hydrolysis and condensation products of a water-silane monomer mixture and a film-forming amount of a polymer having amino, hydroxy and carboxy; hydroxy and amino; amino and carboxy; or amino, hydroxy and carboxy functional groups. The process comprises applying the coating composition (or an acid-catalyzed sol-gel coating composition) substantially free of preformed oxide sol and water-soluble metal salt on a solid substrate, e.g., glass, ceramics, metals, or solid organic polymers , curing the coating, and treating the cured coating with an aqueous electrolyte solution to produce a				

coating having graded porosity which is antireflective over a broad band of the visible spectrum. Thus, 19.2 g **polymer solution** prepared from 342 g 2-hydroxyethyl methacrylate and 39.6 g N,N-dimethylaminoethyl methacrylate was added to a **solution** of methyltrimethoxysilane 21.6, γ -glycidoxypopyl trimethoxysilane 21.6, tetraethylorthosilicate 72, acetic acid 28.8, and water 144 g, 192 g EtOH was added and the clear **solution** was heated 4 h at 30° and 14 h at room temperature, mixed with a surfactant, coated on CR 39, and cured, giving light transmittance 94.8 initially and 99.3 after 15 min treatment with an aqueous **electrolyte solution**

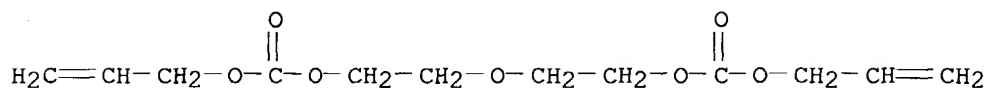
- IC ICM B05D005-06
ICS B32B009-04; B32B017-06; C08F283-00
- CC 42-10 (Coatings, Inks, and Related Products)
- ST acrylic siloxane prepn antireflective coating; **electrolyte** treatment antireflective coating
- IT Siloxanes and Silicones, uses
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(acrylic, siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT Optical materials
(antireflective films, siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT Acrylic **polymers**, uses
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(siloxane-, siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT 75-59-2, Tetramethylammonium hydroxide 471-34-1, Calcium carbonate, uses 497-19-8, Sodium carbonate, uses 546-93-0, Magnesium carbonate 1309-42-8, Magnesium hydroxide 1310-73-2, Sodium hydroxide, uses 7646-78-8, Stannic chloride, uses 21645-51-2, Aluminum hydroxide, uses
RL: NUU (Other use, unclassified); USES (Uses)
(cured coating treatment with aqueous; siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT 183607-25-2P 183607-31-0P 183607-37-6P 183607-42-3P 183607-45-6P
183607-48-9P 183607-50-3P 183607-52-5P 183607-54-7P 183607-55-8P
183607-57-0P 183607-58-1P 183607-59-2P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT 183608-26-6
RL: MSC (Miscellaneous)
(siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT **25656-90-0**, CR 39
RL: MSC (Miscellaneous)
(substrate; siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- IT **25656-90-0**, CR 39
RL: MSC (Miscellaneous)
(substrate; siloxane-based coating composition, process for producing antireflective coatings, and coated articles)
- RN 25656-90-0 HCAPLUS

CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester,
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 142-22-3

CMF C12 H18 O7



L59 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:567240 HCAPLUS

DN 125:200806

TI Organic liquid **electrolyte** plasticizers for **electrolytes**
having enhanced ambient temperature conductivity

IN Ventura, Susanna C.; Narang, Subhash C.; Hum, Georgina; Liu, Peikang;
Ranganathan, Prema; Sun, Luying

PA Sri International, USA

SO PCT Int. Appl., 57 pp.

CODEN: PIXXD2

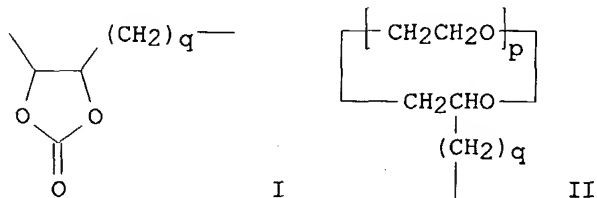
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9621639	A1	19960718	WO 1996-US183	19960104
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2210126	AA	19960718	CA 1996-2210126	19960104
	EP 802898	A1	19971029	EP 1996-905118	19960104
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
	JP 10512390	T2	19981124	JP 1996-521754	19960104
	US 5731104	A	19980324	US 1997-807215	19970228
	US 6015638	A	20000118	US 1997-925456	19970908
PRAI	US 1995-372193		19950113		
	WO 1996-US183		19960104		
	US 1997-807215		19970228		

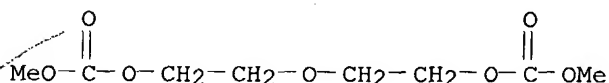
GI



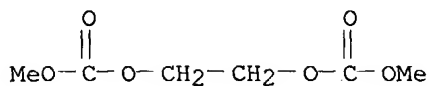
AB The plasticizers are $\text{RO}(\text{OC}_2\text{R}_{14})_a(\text{CO})_b[\text{O}(\text{X})\text{CR}_2(\text{Z})(\text{R}_3)(\text{X})\text{COCO}]_l(\text{OC}_2\text{R}_{14})_a\text{OR}$,
where R is independently selected from alkyl, $(\text{CO})\text{OR}_4$,
 $(\text{CrH}_2\text{r})_t(\text{OC}_2\text{R}_{14})_a\text{OR}_4$, I, and II; R₁ is independently selected from H,

alkyl, aryl, alkenyl, F, and fluorinated alkyl; R2 is alkylene or (CrH2r)t(OC2R14)a; R4 is H or alkyl; X is lower alkylene; R3 is selected from H, aryl, and alkyl; Z is selected from H and CH2O(CO)OR; a, c, l, r, and t are integers of 0-10 inclusive, b is 0, 1, or 2; p is an integer of 1-5 inclusive; and q is an integer of 1-6 inclusive. These and addnl. defined plasticizers and conductive compns. and films containing them are used in solid-state batteries, fuel cells, sensors, supercapacitors, electrochromic devices, etc.

- IC ICM C07C069-96
ICS C07D317-36; C07D323-00; H01B001-12; H01H010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 35, 38, 59, 74, 76
- ST battery liq **electrolyte** plasticizer; fuel cell liq **electrolyte** plasticizer; sensor liq **electrolyte** plasticizer; supercapacitor liq **electrolyte** plasticizer; electrochromic device liq **electrolyte** plasticizer
- IT Battery **electrolytes**
Fuel-cell **electrolytes**
Sensors
(organic liquid **electrolyte** plasticizers for **electrolytes** having enhanced ambient temperature conductivity)
- IT Electric capacitors
(super; organic liquid **electrolyte** plasticizers for **electrolytes** having enhanced ambient temperature conductivity)
- IT Optical imaging devices
(electrochromic, organic liquid **electrolyte** plasticizers for **electrolytes** having enhanced ambient temperature conductivity)
- IT 78-39-7 626-84-6 2049-74-3 29536-36-5 **87292-23-7**
88754-66-9 103924-88-5 116146-29-3
116170-01-5 151801-15-9 167951-82-8 167951-83-9
181044-06-4 181044-07-5 181044-08-6 181044-09-7
181044-10-0
RL: DEV (Device component use); USES (Uses)
(organic liquid **electrolyte** plasticizers for **electrolytes** having enhanced ambient temperature conductivity)
- IT 29536-37-6P **35466-87-6P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(organic liquid **electrolyte** plasticizers for **electrolytes** having enhanced ambient temperature conductivity)
- IT **87292-23-7 88754-66-9 103924-88-5**
116146-29-3 116170-01-5 181044-07-5
181044-09-7
RL: DEV (Device component use); USES (Uses)
(organic liquid **electrolyte** plasticizers for **electrolytes** having enhanced ambient temperature conductivity)
- RN 87292-23-7 HCAPLUS
- CN 2,4,7,10-Tetraoxaundecan-11-oic acid, 3-oxo-, methyl ester (9CI) (CA INDEX NAME)

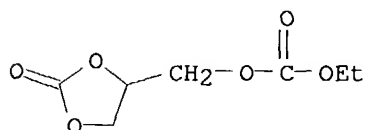


- RN 88754-66-9 HCAPLUS
- CN Carbonic acid, 1,2-ethanediyl dimethyl ester (9CI) (CA INDEX NAME)



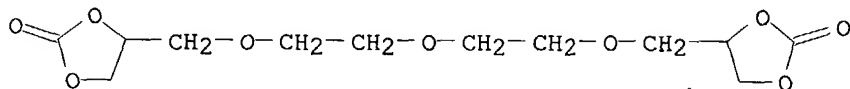
RN 103924-88-5 HCAPLUS

CN Carbonic acid, ethyl (2-oxo-1,3-dioxolan-4-yl)methyl ester (9CI) (CA INDEX NAME)



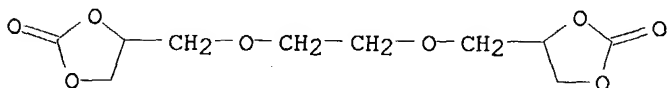
RN 116146-29-3 HCAPLUS

CN 1,3-Dioxolan-2-one, 4,4'-[oxybis(2,1-ethanediyloxymethylene)]bis- (9CI)
(CA INDEX NAME)



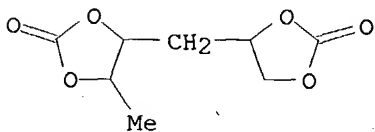
RN 116170-01-5 HCAPLUS

CN	1,3-Dioxolan-2-one, 4,4'-[1,2-ethanediylbis(oxyethylene)]bis-	(9CI)	(CA
	INDEX NAME)		



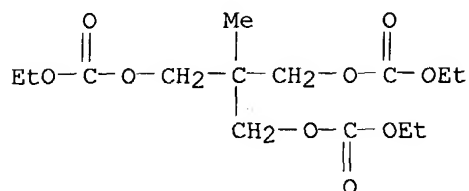
RN 181044-07-5 HCAPLUS

CN 1,3-Dioxolan-2-one, 4-methyl-5-[(2-oxo-1,3-dioxolan-4-yl)methyl]- (9CI)
(CA INDEX NAME)



RN 181044-09-7 HCAPLUS

CN Carbonic acid, 2-[[(ethoxycarbonyl)oxy)methyl]-2-methyl-1,3-propanediyl
diethyl ester (9CI) (CA INDEX NAME)



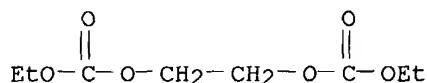
IT 35466-87-6P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(organic liquid **electrolyte plasticizers** for**electrolytes** having enhanced ambient temperature conductivity)

RN 35466-87-6 HCAPLUS

CN Carbonic acid, 1,2-ethanediyl diethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:524277 HCAPLUS

DN 105:124277

TI Radiation-sensitive recording material and its preparation

IN Seibel, Markus; Kaempf, Guenther

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 30 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3433247	A1	19860320	DE 1984-3433247	19840911
	CA 1318540	A1	19930601	CA 1985-489821	19850830
	EP 174588	A2	19860319	EP 1985-111092	19850903
	EP 174588	A3	19871014		
	EP 174588	B1	19910320		
	R: CH, DE, FR, GB, IT, LI, NL				
	ZA 8506776	A	19860430	ZA 1985-6776	19850904
	JP 61077053	A2	19860419	JP 1985-197878	19850909
	JP 05069214	B4	19930930		
	BR 8504367	A	19860708	BR 1985-4367	19850910
	US 4842982	A	19890627	US 1987-62340	19870609
PRAI	DE 1984-3433247		19840911		
	US 1985-772704		19850905		

AB Radiation-sensitive recording materials for the production of lithog. plates are described which have a rough top layer to decrease the amount of time necessary to achieve complete contact when used in a vacuum-frame copying device. The rough top layer is obtained by electrostatically spraying fine drops of a **solution** onto the plate. Thus, an **electrolytically** roughened and anodized Al band was coated with a photosensitive composition containing a PhOH-HCHO novolak 6.6, 1,2-naphthoquinone-2-

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

diazide-4-sulfonic acid 4-(2-phenylprop-2-yl) Ph ester 1.1, 2,2'-bis(1,2-naphthoquinone-2-diazide-5-sulfonyloxy)dinaphthyl-1,1'-methane 0.6, 1,2-naphthoquinone-2-diazide-4-sulfonyl chloride 0.24, Crystal Violet 0.08, and a BuOAc-2-methoxyethanol-THF (1:4:5) mixture 91.38 parts. The resultant material was then electrostatically spray-coated with a composition containing the same above solids content and a BuOAc-cyclohexanone-2-ethoxyethanol (1:7:2) mixture 51.72 parts and dried to give a rough surface of photosensitive particles having excellent adhesion to the underlayer.

IC ICM G03F007-02

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST lithog plate vacuum frame contact; copying vacuum frame lithog plate; rough surface frame lithog plate

IT Epoxy resins, uses and miscellaneous

RL: USES (Uses)

(benzoates, photosensitive compns. containing, for production of rough surface

layer on lithog. for improved vacuum frame contact)

IT Lithographic plates

(photosensitive materials for fabrication of, with rough surface layer for improved vacuum frame contact)

IT Vinyl acetal **polymers**

RL: USES (Uses)

(butyrals, photosensitive composition containing, for production of rough surface

layer on lithog. plate for improved vacuum frame contact)

IT Vinyl acetal **polymers**

RL: USES (Uses)

(formals, photosensitive compns. containing, for production of rough surface layer on lithog. plates for improved vacuum frame contact)

IT 9016-83-5

RL: USES (Uses)

(novolak, photosensitive composition containing, for production of rough surface

layer on lithog. plate for improved vacuum frame contact)

IT 9003-35-4

RL: USES (Uses)

(novolak, photosensitive compns. containing, for production of rough surface layer on lithog. plates for improved vacuum frame contact)

IT 65-85-0D, esters with epoxy resins 147-14-8 467-63-0 548-62-9

574-93-6 587-98-4 602-56-2 2481-94-9 2509-26-4D, reaction products with methoxydiphenylaminediazonium sulfate, mesitylene sulfonate

3453-83-6D, **salts** with bismuthoxymethyldiphenyl

ether-methoxydiphenylaminediazonium **salt** reaction products

9011-13-6D, alkyl esters 23121-00-8 29377-89-7D, reaction products

with bismethoxymethyldiphenyl ether, mesitylene sulfonate 33910-44-0

36451-09-9 **64523-73-5** 71241-63-9 81332-35-6 82721-52-6

84886-87-3

RL: USES (Uses)

(photosensitive composition containing, for production of rough surface layer on

lithog. plate for improved vacuum frame contact)

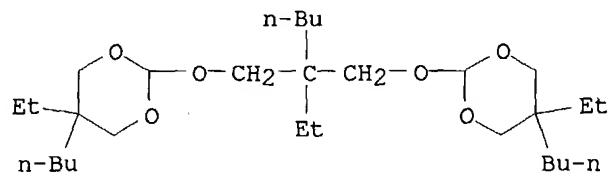
IT **64523-73-5**

RL: USES (Uses)

(photosensitive composition containing, for production of rough surface layer on

lithog. plate for improved vacuum frame contact)

RN 64523-73-5 HCAPLUS
 CN 1,3-Dioxane, 2,2'-[(2-butyl-2-ethyl-1,3-propanediyl)bis(oxy)]bis[5-butyl-5-ethyl- (9CI) (CA INDEX NAME)



L59 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:432994 HCAPLUS

DN 105:32994

TI One-step electrochemical image formation process

IN Pliefke, Engelbert

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 48 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3416867	A1	19851114	DE 1984-3416867	19840508
	US 4614570	A	19860930	US 1985-730632	19850506
	JP 60244597	A2	19851204	JP 1985-96152	19850508
PRAI	DE 1984-3416867		19840508		

AB A 1-step electrochem. imaging and development or decoating process for use with com. reproduction layers upon the usual supports is described. In the process, the material, which has an elec. conductive support, is subjected to an elec. current by ≥ 1 needle-like electrode in the presence of an aqueous **electrolyte solution** containing ≥ 1 **salt** of an organic or inorg. acid from 0.1 weight% up to saturation and having a pH of 2.0

to 10.0. Thus, an electrochem. roughened and anodically oxidized Al foil was flow-coated with a pos.-working composition containing a cresol-HCHO novolak

6.6, 4-(2-phenylprop-2-yl)phenyl 1,2-naphthoquinone-2-diazido-4-sulfonate 1.1, 2,2'-bis[1,2-naphthoquinone-2-diazido-5-sulfonyloxy]dinaphthyl-1,1'-methane 0.6, 1,2-naphthoquinone-2-diazido-4-sulfonyl chloride 0.24, crystal violet 0.08, and a BuOAc-ethylene glycol mono-Me ether-THF (1:4-5) mixture 91.36 parts, dried, placed in an aqueous **electrolyte solution** containing Li2SO4 3 and Na octyl sulfate 1% (pH 3.5) and imaged with a needle electrode.

IC ICM G03F007-00

ICS B05D007-14; B41M005-20; B41N003-00; C25D011-04; C25D013-06

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST lithog plate electrochem imaging development; offset lithog plate imaging development

IT Surfactants

(**electrolyte solution** containing, in one-step electrochem.

imaging and development of photosensitive offset lithog. plates)

IT Phenolic resins, uses and miscellaneous

RL: USES (Uses)

(offset lithog. plates with photosensitive layer containing, one-step electrochem. imaging and development process for)

IT Vinyl acetal **polymers**

RL: USES (Uses)

(butyrals, reaction products with propenyl sulfonyl isocyanate, offset lithog. plates with photosensitive layers containing, one-step electrochem. imaging and development of)

IT Lithographic plates

(offset, one-step electrochem. imaging and development process in fabrication of)

IT 64-19-7, uses and miscellaneous 77-98-5 127-09-3 139-88-8 142-31-4
144-55-8, uses and miscellaneous 151-21-3, uses and miscellaneous
554-13-2 1330-43-4 7487-88-9, uses and miscellaneous 7631-99-4, uses
and miscellaneous 7632-05-5 7647-14-5, uses and miscellaneous
7647-15-6, uses and miscellaneous 7722-76-1 7757-82-6, uses and
miscellaneous 7772-98-7 7783-20-2, uses and miscellaneous 9043-30-5
10043-01-3 10043-35-3, uses and miscellaneous 10377-48-7 11105-06-9
24938-91-8 102847-97-2

RL: USES (Uses)

(**electrolyte solution** containing, in one-step electrochem. imaging and development of photosensitive offset lithog. plates)

IT 81-88-9 548-62-9 602-56-2 989-38-8 1042-84-8 1679-98-7
2481-94-9 2509-26-4D, reaction products with
methoxydiphenylaminediazonium sulfate, mesitylene sulfonate 3453-83-6D,
salts with bismethoxymethyldiphenyl ether-
methoxydiphenylaminediazonium **salt** reaction products 9003-20-7
9003-35-4 9011-13-6 9016-83-5 13881-54-4D, reaction products with
poly(vinyl butyral) 19778-85-9 22159-33-7 23121-00-8 25054-06-2
25086-15-1 29377-89-7D, reaction products with bismethoxymethyldiphenyl
ether, mesitylene sulfonate 33910-44-0 36451-09-9 53050-67-2
64523-73-5 65846-95-9 67527-24-6 73477-92-6 82721-52-6
84886-87-3 89800-44-2 102966-34-7

RL: USES (Uses)

(offset lithog. plates with photosensitive layer containing, one-step electrochem. imaging and development process for)

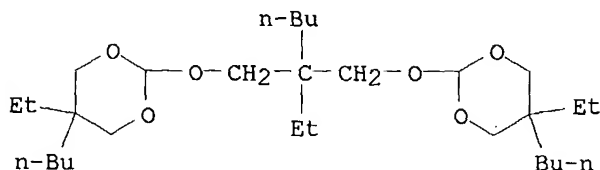
IT **64523-73-5**

RL: USES (Uses)

(offset lithog. plates with photosensitive layer containing, one-step electrochem. imaging and development process for)

RN 64523-73-5 HCAPLUS

CN 1,3-Dioxane, 2,2'-[(2-butyl-2-ethyl-1,3-propanediyl)bis(oxy)]bis[5-butyl-5-ethyl- (9CI) (CA INDEX NAME)



L59 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:165448 HCAPLUS
DN 100:165448
TI Electrochemical development process for copying layers

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

IN Pliefke, Engelbert
 PA Hoechst A.-G. , Fed. Rep. Ger.
 SO Ger. Offen., 38 pp.
 CODEN: GWXXBX

DT Patent
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3134054	A1	19830505	DE 1981-3134054	19810828
	ZA 8205879	A	19830629	ZA 1982-5879	19820813
	CA 1189378	A1	19850625	CA 1982-409425	19820813
	US 4549944	A	19851029	US 1982-408906	19820817
	EP 73445	B1	19860611	EP 1982-107707	19820823
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	AT 20394	E	19860615	AT 1982-107707	19820823
	AU 8287543	A1	19830303	AU 1982-87543	19820824
	JP 58042042	A2	19830311	JP 1982-146306	19820825
	JP 03047495	B4	19910719		
	FI 8202965	A	19830301	FI 1982-2965	19820826
	ES 515330	A1	19830601	ES 1982-515330	19820827
	BR 8205025	A	19830809	BR 1982-5025	19820827
PRAI	DE 1981-3134054		19810828		
	EP 1982-107707		19820823		
AB	Photosensitive compns. for offset printing plates and photoresists are readily electrochem. developed by removing the nonexposed portion of the photosensitive layer with an aqueous electrolyte bath at pH 2-10 containing ≥ 1 organic or inorg. acid salt from 0.1 weight% to the saturation limit and a surfactant 0.1-5 weight% with a c.d. of 1-100 A/dm ² at 20-70%. Thus, an electrochem. roughened and anodized Al foil was coated with a pos-working photosensitive composition containing cresol-HCHO polymer , 4-(2-phenylprop-2-yl)phenyl 1,2-naphthoquinone-2-diazide-4-sulfonate, 2,2'-bis(1,2-naphthoquinone-2-diazide-5-sulfonyloxy)dinaphthyl-(1,1')-methane, 1,2-naphthoquinone-2-diazide-4-sulfochloride, crystal violet, ethylene glycol monomethyl ether, THF, and BuOAc. This coated plate was exposed and the developed in a soln . containing 3% Li ₂ SO ₄ and 1% Na octyl sulfate at pH 3.5 under 20 V for 11-14 s to give a printing plate.				
IC	G03C005-24; G03F007-00; G03G013-10				
CC	74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)				
ST	electrolytic development photosensitive lithog plate; photoresist electrolytic development; electrochem development photosensitive lithog plate				
IT	Phenolic resins, uses and miscellaneous RL: USES (Uses) (photosensitive lithog. plates and photoresist compns. containing, electrochem. development of)				
IT	Vinyl acetal polymers RL: USES (Uses) (butyrals, reaction products with propenyl sulfonyl isocyanate, offset lithog. plates with photosensitive layers containing, electrochem. development of)				
IT	Lithographic plates (offset, photosensitive, electrochem. development of)				
IT	Resists (photo-, electrochem. development of)				
IT	64-19-7, uses and miscellaneous		77-98-5	127-09-3	142-87-0

144-55-8, uses and miscellaneous 151-21-3, uses and miscellaneous
 554-13-2 1330-43-4 5324-84-5 7487-88-9, uses and miscellaneous
 7601-54-9 7631-99-4, uses and miscellaneous 7647-14-5, uses and
 miscellaneous 7647-15-6, uses and miscellaneous 7757-82-6, uses and
 miscellaneous 7772-98-7 9043-30-5 10043-01-3 10043-35-3, uses and
 miscellaneous 10124-31-9 10377-48-7 11105-06-9 89697-46-1
 89761-16-0

RL: USES (Uses)

(electrolyte solution containing, in electrochem.
 development of photosensitive offset lithog. plates)

IT 81-88-9 1679-98-7 9011-13-6 22159-33-7

RL: USES (Uses)

(electrophotog. plate with photoconductive layer containing, electrochem.
 removal of nonimage areas of, in offset lithog. plate fabrication)

IT 57-13-6D, polymers 467-63-0 548-62-9 602-56-2 989-38-8
 1042-84-8 2481-94-9 5284-79-7 9003-35-4 9016-83-5 19778-85-9
 23121-00-8 25086-15-1 33910-44-0 36451-09-9 36482-93-6
 53050-67-2 64523-73-5 67527-24-6 82721-52-6 83046-04-2
 89697-35-8 89777-73-1 89800-44-2

RL: USES (Uses)

(offset lithog. plate with photosensitive layer containing, electrochem.
 development of)

IT 9003-20-7 25054-06-2 74276-41-8

RL: TEM (Technical or engineered material use); USES (Uses)

(photoresist comps. containing, electrochem. development of)

IT 80937-22-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

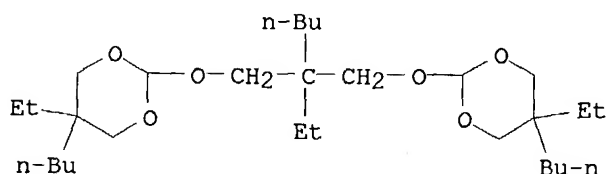
IT 64523-73-5

RL: USES (Uses)

(offset lithog. plate with photosensitive layer containing, electrochem.
 development of)

RN 64523-73-5 HCAPLUS

CN 1,3-Dioxane, 2,2'-[(2-butyl-2-ethyl-1,3-propanediyl)bis(oxy)]bis[5-butyl-5-ethyl- (9CI) (CA INDEX NAME)



L59 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1982:482747 HCAPLUS

DN 97:82747

TI Relief copying

IN Buhr, Gerhard; Geus, Marie Luise

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 25 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

PI	DE 3038605	A1	19820603	DE 1980-3038605	19801013
	EP 49840	B1	19850109	EP 1981-107889	19811003
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	AT 11186	E	19850115	AT 1981-107889	19811003
	CA 1164712	A1	19840403	CA 1981-387598	19811008
	US 4421844	A	19831220	US 1981-310276	19811009
	JP 57100427	A2	19820622	JP 1981-161079	19811012
	JP 05031133	B4	19930511		
PRAI	DE 1980-3038605		19801013		
	EP 1981-107889		19811003		

AB A pos.-working photoimaging material carries on a film, metal, wood, or ceramic support a combination of a compound liberating an acid when exposed to <500 nm, 0.2-5%, such as a diazonium **salt**, a quinonediazide sulfochloride, or an s-triazine with 2 haloalkyl groups, with ≥ 1 compound containing a COC group, which is cleavable by an acid, as used in previous patents, such as a polyacetal, **polymeric** carboxylic orthoester, enol ether, or acyliminocarbonate, 14-44%, in 55-85% of a water-insol. novolac as binder. A 0.5-2 min treatment at 65-90° between exposure and development in an aqueous alkaline **solution**, to remove the exposed areas, greatly increases the efficiency of the process. Thus, **electrolytically** roughened anodized Al was coated with a .apprx.2 μ layer consisting of cresol-HCHO novolac 76.2, triethyleneglycol bis(diphenoxymethyl ether) 18.2, trihydroxybenzophenone 1.4, 2-(4-methoxy-1-naphthyl)-4,6-bis(trichloromethyl)-s-triazine, and crystal violet 0.6 parts. A 12 s exposure to a 5 kW metal halide lamp at 110 cm through a wedge with 13 steps, followed 30 s later with development in a **solution** containing Na₂SiO₃, Na₃PO₄, and NaH₂PO₄ resulted in a pos. image covering step 5. By waiting 10 min prior to development, or by heating the material 50 s in an oven of 80°, the coverage was extended to step 6.

IC G03F001-02

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photoimaging photoresist printing plate; acid liberating photoimaging compn

IT Photoimaging compositions and processes
(containing acid liberating compound and acid-cleavable ether group-containing compound)

IT Printing plates
(photosensitive compns. containing acid-liberating compound and acid-cleavable ether group-containing compound for fabrication of)

IT Resists
(photo-, compns. containing acid-liberating compound and acid-cleavable ether group-containing compound as)

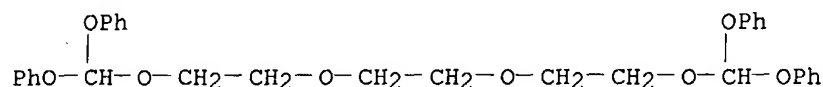
IT	42573-57-9	52448-48-3	64524-07-8	64524-34-1	65472-31-3
	69432-40-2	69432-41-3	74823-16-8	81119-40-6	82721-52-6
	82721-53-7				

RL: USES (Uses)
(photoimaging composition containing)

IT **64524-07-8**
RL: USES (Uses)
(photoimaging composition containing)

RN 64524-07-8 HCAPLUS

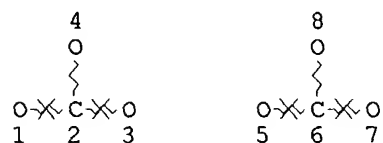
CN 2,5,8,11-Tetraoxadodecane, 1,1,12,12-tetraphenoxy- (9CI) (CA INDEX NAME)



=> => D QUE

L1

STR



NODE ATTRIBUTES:

NSPEC	IS	RC	AT	1
NSPEC	IS	RC	AT	2
NSPEC	IS	RC	AT	3
NSPEC	IS	RC	AT	5
NSPEC	IS	RC	AT	6
NSPEC	IS	RC	AT	7

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

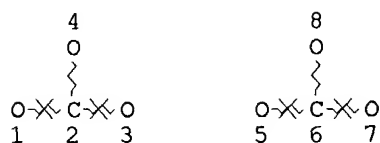
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L2 14691 SEA FILE=REGISTRY SSS FUL L1
 L4 (67616) SEA FILE=REGISTRY ABB=ON PUR/PCT
 L5 (243) SEA FILE=REGISTRY ABB=ON L4 AND GLYCID?
 L6 (10123) SEA FILE=REGISTRY ABB=ON L4 AND OXIR?
 L7 (299441) SEA FILE=REGISTRY ABB=ON PACR/PCT
 L8 (12801) SEA FILE=REGISTRY ABB=ON L4 AND L7
 L9 (2267) SEA FILE=REGISTRY ABB=ON L8 AND (L6 OR L5)
 L10 (0) SEA FILE=REGISTRY ABB=ON L8 AND SACCHAR?
 L11 (59) SEA FILE=REGISTRY ABB=ON L8 AND LACTON?
 L12 (4081) SEA FILE=REGISTRY ABB=ON 557-75-5/CRN
 L13 (31) SEA FILE=REGISTRY ABB=ON L8 AND L12
 L14 (2346) SEA FILE=REGISTRY ABB=ON L10 OR L11 OR L13 OR L9
 L15 (184348) SEA FILE=REGISTRY ABB=ON 1.30.1/RID
 L16 (2236) SEA FILE=REGISTRY ABB=ON L9 AND L15
 L17 (2346) SEA FILE=REGISTRY ABB=ON L14 OR L16
 L18 (1138) SEA FILE=HCAPLUS ABB=ON L14 OR L17
 L19 (1100) SEA FILE=HCAPLUS ABB=ON L9
 L20 (1) SEA FILE=HCAPLUS ABB=ON L19(L)?SACCHAR?
 L21 (2) SEA FILE=HCAPLUS ABB=ON L19 AND ?SACCHARID?
 L22 (3134) SEA FILE=REGISTRY ABB=ON SACCHARID?
 L23 (286263) SEA FILE=HCAPLUS ABB=ON L22
 L24 (194679) SEA FILE=HCAPLUS ABB=ON ?CARBOHYDRATE?
 L25 (21) SEA FILE=HCAPLUS ABB=ON L18 AND (BATTER? OR ELECTROLYT? OR
 ELECTROCHEM?/SC,SX)
 L26 STR



NODE ATTRIBUTES:

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NSPEC  IS RC    AT  1
NSPEC  IS RC    AT  2
NSPEC  IS RC    AT  3
NSPEC  IS RC    AT  5
NSPEC  IS RC    AT  6
NSPEC  IS RC    AT  7

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DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

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L27 ( 14691)SEA FILE=REGISTRY SSS FUL L26
L28 ( 1)SEA FILE=REGISTRY ABB=ON L27 AND (L14 OR L17)
L29 ( 14)SEA FILE=REGISTRY ABB=ON L27 AND L8
L30 ( 1)SEA FILE=HCAPLUS ABB=ON L28
L31 ( 11)SEA FILE=HCAPLUS ABB=ON L29
L32 ( 12684)SEA FILE=HCAPLUS ABB=ON L27
L33 ( 1)SEA FILE=HCAPLUS ABB=ON L25 AND L32
L34 ( 5189)SEA FILE=HCAPLUS ABB=ON L8
L35 ( 38)SEA FILE=HCAPLUS ABB=ON L32 AND L34
L36 ( 38)SEA FILE=HCAPLUS ABB=ON L31 OR L31 OR L35
L37 ( 1)SEA FILE=HCAPLUS ABB=ON L36 AND (BATTER? OR ELECTROLYT? OR
ELECTROCHEM?/SC,SX)
L38 ( 333)SEA FILE=HCAPLUS ABB=ON L32 AND (BATTER? OR ELECTROLYT? OR
ELECTROCHEM?/SC,SX)
L39 ( 2)SEA FILE=HCAPLUS ABB=ON L38 AND (STARCH OR DEXTRIN OR
GLYCOGEN OR INULIN)
L40 ( 9)SEA FILE=HCAPLUS ABB=ON L38 AND (L23 OR L24 OR ?SACCHAR?)
L41 ( 10)SEA FILE=HCAPLUS ABB=ON L39 OR L40
L42 ( 1)SEA FILE=HCAPLUS ABB=ON L41 AND (?URETHAN? OR ?CYANAT?)
L43 ( 2)SEA FILE=HCAPLUS ABB=ON L30 OR L33 OR L37 OR L42
L44 ( 0)SEA FILE=HCAPLUS ABB=ON (L20 OR L21) AND (BATTER? OR ELECTROLY
T? OR ELECTROCHEM?/SC,SX)
L45 ( 2)SEA FILE=HCAPLUS ABB=ON L43 OR L44
L46 ( 33)SEA FILE=HCAPLUS ABB=ON L32 AND ?PENETRAT?(3A) (NETWORK? OR
STRUCTURE?)
L47 ( 1)SEA FILE=HCAPLUS ABB=ON L46 AND (BATTER? OR ELECTROLYT? OR
ELECTROCHEM?/SC,SX)
L48 3 SEA FILE=HCAPLUS ABB=ON L45 OR L47
L49 12684 SEA FILE=HCAPLUS ABB=ON L2
L50 48 SEA FILE=HCAPLUS ABB=ON L49(L) PLASTICI?
L51 2 SEA FILE=HCAPLUS ABB=ON L50 AND ELECTROLYT?
L52 192 SEA FILE=HCAPLUS ABB=ON L49 AND ELECTROLYT?
L53 2 SEA FILE=HCAPLUS ABB=ON L52 AND ?POLYMER?(3A) (MATRIX OR
MATRICE? )
L54 68 SEA FILE=HCAPLUS ABB=ON L52 AND POLYMER?

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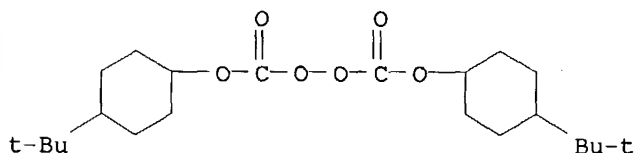
L55 34 SEA FILE=HCAPLUS ABB=ON L54 AND (GEL OR GELS OR SOLUTION?)
 L56 29 SEA FILE=HCAPLUS ABB=ON L54 AND SALT#
 L57 16 SEA FILE=HCAPLUS ABB=ON L55 AND L56
 L58 18 SEA FILE=HCAPLUS ABB=ON L51 OR L53 OR L57
 L59 17 SEA FILE=HCAPLUS ABB=ON L58 NOT L48
 L60 42 SEA FILE=HCAPLUS ABB=ON L52 AND (POLYMER? OR PLASTIC?)/SC,SX
 L61 18 SEA FILE=HCAPLUS ABB=ON L60 AND (GEL# OR LIQUID? OR SOLUTION?)

 L62 8 SEA FILE=HCAPLUS ABB=ON L61 NOT (L48 OR L59)

=> D L62 BIB ABS IND HITSTR 1-8

L62 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:970422 HCAPLUS
 DN 140:146916
 TI Polymer **gel electrolytes** prepared from P(EG-co-PG) and
 their nanocomposites using organically modified montmorillonite
 AU Jung, H. R.; Cho, M. S.; Ahn, J. H.; Nam, J. D.; Lee, Y.
 CS School of Applied Chemistry and Chemical Engineering, & Polymer Technology
 Institute, Sungkyunkwan University, Suwon, 440-746, S. Korea
 SO Journal of Applied Polymer Science (2004), 91(2), 894-899
 CODEN: JAPNAB; ISSN: 0021-8995
 PB John Wiley & Sons, Inc.
 DT Journal
 LA English
 AB Polymer **gel electrolytes** were prepared by thermal
 crosslinking reaction of a series of acrylic endcapped poly(ethylene
 glycol) and poly(propylene glycol) [P(EG-co-PG)] having various geometries
 and mol. wts. Acrylic end-capped prepolymers were prepared by the
 esterification of low mol. weight (Mn: 1900-5000) P(EG-co-PG) with acrylic
 acid. The linear increase in the ionic conductivity of polymer **gel**
electrolyte films was observed with increasing temperature. The increase in
 the conductivity was also monitored by increasing the mol. weight of precursor
 polymer. Nanocomposite **electrolytes** were prepared by the addition of
 5 wt % of organically modified layered silicate (montmorillonite) into the
gel polymer **electrolytes**. The enhancement of the ionic
 conductivity as well as mech. properties was observed in the nanocomposite
 systems.
 CC 37-5 (Plastics Manufacture and Processing)
 Section cross-reference(s): 72
 ST polyethylene propylene oxide polyacrylate lithium **electrolyte**
 montmorillonite intercalation nanocomposite
 IT Quaternary ammonium compounds, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (bis(hydroxyethyl)methyltallow alkyl, chlorides, montmorillonite
 modifying agents; **gel electrolytes** prepared from
 ethylene oxide-propylene oxide copolymer acrylate polymers and their
 nanocomposites with organically modified montmorillonite)
 IT Ionic conductivity
 Polymer **electrolytes**
 Polymer morphology
 (**gel electrolytes** prepared from ethylene
 oxide-propylene oxide copolymer acrylate polymers and their
 nanocomposites with organically modified montmorillonite)
 IT Intercalation compounds
 RL: PRP (Properties)
 (**gel electrolytes** prepared from ethylene

- oxide-propylene oxide copolymer acrylate polymers and their nanocomposites with organically modified montmorillonite)
- IT 15520-11-3
 RL: CAT (Catalyst use); USES (Uses)
 (Percadox 16, in polyoxyalkylene acrylate polymerization; **gel electrolytes** prepared from ethylene oxide-propylene oxide copolymer acrylate polymers and their nanocomposites with organically modified montmorillonite)
- IT 33454-82-9, Lithium triflate
 RL: NUU (Other use, unclassified); USES (Uses)
 (**gel electrolytes** prepared from ethylene oxide-propylene oxide copolymer acrylate polymers and their nanocomposites with organically modified montmorillonite)
- IT 7439-93-2D, Lithium, complexes with ethylene oxide-propylene oxide copolymer polyacrylates 85887-85-0D, lithium complexes 111459-11-1D, Ethylene oxide-propylene oxide copolymer, diacrylate, homopolymer, lithium complexes 652968-54-2D, Ethylene oxide-propylene oxide block copolymer, diacrylate, homopolymer, lithium complexes
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (**gel electrolytes** prepared from ethylene oxide-propylene oxide copolymer acrylate polymers and their nanocomposites with organically modified montmorillonite)
- IT 1318-93-0, Montmorillonite, properties
 RL: PRP (Properties)
 (**gel electrolytes** prepared from ethylene oxide-propylene oxide copolymer acrylate polymers and their nanocomposites with organically modified montmorillonite)
- IT 15520-11-3
 RL: CAT (Catalyst use); USES (Uses)
 (Percadox 16, in polyoxyalkylene acrylate polymerization; **gel electrolytes** prepared from ethylene oxide-propylene oxide copolymer acrylate polymers and their nanocomposites with organically modified montmorillonite)
- RN 15520-11-3 HCAPLUS
- CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI)
 (CA INDEX NAME)



RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2000:368489 HCAPLUS
 DN 133:18277
 TI Ionically conductive compositions and cells made from them
 IN Takaoka, Kazuchiyo; Ikegami, Koshiro; Hyodo, Kenji; Watanabe, Hiroaki;
 Hino, Takakazu; Shikano, Naoki; Andou, Ei-ji
 PA Mitsubishi Paper Mills Ltd., Japan; Nippon Unicar Co., Ltd.
 SO PCT Int. Appl., 73 pp.
 CODEN: PIXXD2

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000031186	A1	<u>20000602</u>	WO 1999-JP5707	19991015
	W: DE, JP, US				
	JP 2000154254	A2	20000606	JP 1998-331521	19981120
	DE 19982656	T	20010517	DE 1999-19982656	19991015
	US 6589383	B1	20030708	US 2000-600640	20000720
PRAI	JP 1998-331521	A	19981120		
	WO 1999-JP5271	W	19990928		
	WO 1999-JP5707	W	19991015		
AB	The compns. comprise linear copolymers derived from compds. A and B both bearing 2 functional groups and preferably crosslinked, and an electrolyte . Thus, mixing GO-p-C6H4CH2-p-C6H4OCH2CHOHCH2O-p-C6H4CH2-p-C6H4OG (G = glycidyl group) 56.8 with 3,9-bis(3-aminopropyl)-2,4,8,10-teraoxaspiro[5.5]undecane 27.4, tetrabutylammonium perchlorate 10, and DMF 80 parts and heating at 100° for 6 h gave an ionically conductive gel composition with conductivity 5x10 ⁻⁵ S/cm.				
IC	ICM C08L101-02				
	ICS C08L083-10; H01B001-06; H01B001-12				
CC	37-3 (Plastics Manufacture and Processing)				
	Section cross-reference(s): 52				
ST	epoxy amine adduct polymer conductive compn elec cell; battery cell elec conductive compn				
IT	Electrolytes				
	(ionically conductive compns. and cells made from them)				
IT	Secondary batteries				
	(lithium; ionically conductive compns. and cells made from them)				
IT	Polysiloxanes, preparation				
	Polysiloxanes, preparation				
	RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(polyoxyalkylene-, block, graft; ionically conductive compns. and cells made from them)				
IT	Polysiloxanes, preparation				
	Polysiloxanes, preparation				
	RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(polyoxyalkylene-, block; ionically conductive compns. and cells made from them)				
IT	Polyurethanes, preparation				
	RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(polyoxyalkylene-, gel ; ionically conductive compns. and cells made from them)				
IT	Polyoxyalkylenes, preparation				
	Polyoxyalkylenes, preparation				
	RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(polysiloxane-, block, graft; ionically conductive compns. and cells made from them)				
IT	Polyoxyalkylenes, preparation				
	Polyoxyalkylenes, preparation				
	RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(polysiloxane-, block; ionically conductive compns. and cells made from them)				

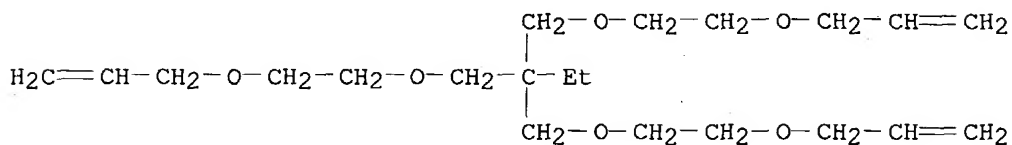
- them)
- IT 171483-98-ODP, Dimethylsilanediol-ethylene oxide-methylsilanediol graft copolymer methyl ether, trimethylsilyl-terminated 271790-67-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blends; ionically conductive compns. and cells made from them)
- IT 1923-70-2, Tetrabutylammonium perchlorate 7791-03-9, Lithium perchlorate 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 90076-65-6, Lithium bis(trifluoromethylsulfonyl)amide
RL: TEM (Technical or engineered material use); USES (Uses)
(electrolytes; ionically conductive compns. and cells made from them)
- IT 272109-73-6P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gel; ionically conductive compns. and cells made from them)
- IT 1189-93-1DP, 1,1,3,3,5,5-Hexamethyltrisiloxane, polymers with ethylenically unsatd. monomers and polysiloxanes 1469-70-1DP, Allyl ethyl carbonate, reaction products with polysiloxanes 17832-16-5DP, Triallyl trimesate, polymers with ethylenically unsatd. group-containing monomers and hydrogen-terminated polysiloxanes 60120-15-2DP, polymers with ethylenically unsatd. group-containing monomers and hydrogen-terminated polysiloxanes 60120-15-2DP, polymers with ethylenically unsatd. compds. and siloxanes 134196-67-1DP, polymers with polysiloxanes 141668-87-3DP, polymers with ethylenically unsatd. group-containing monomers and hydrogen-terminated polysiloxanes 156118-35-3DP, hydrogen-terminated, polymers with ethylenically unsatd. group-containing monomers 156309-05-6P, Dimethylsilanediol-ethylene oxide-propylene oxide block copolymer 176896-14-3DP, Dimethylsilanediol-ethylene oxide-propylene oxide block graft copolymer, trimethylsilyl-terminated 271790-78-4DP, polymers with ethylenically unsatd. group-containing monomers and hydrogen-terminated polysiloxanes 271790-80-8DP, polymers with ethylenically unsatd. group-containing monomers and hydrogen-terminated polysiloxanes 272109-74-7P 272109-75-8P 272109-76-9P 272109-77-0P 272109-78-1P 272109-79-2P 272109-80-5P 272109-81-6P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gel; ionically conductive compns. and cells made from them)
- IT 271790-63-7P 272109-72-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ionically conductive compns. and cells made from them)
- IT 271790-72-8
RL: MOA (Modifier or additive use); USES (Uses)
(ionically conductive compns. and cells made from them)
- IT 33454-82-9, Lithium trifluoromethanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(ionically conductive compns. and cells made from them)
- IT 272109-77-0P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gel; ionically conductive compns. and cells made from them)
- RN 272109-77-0 HCAPLUS
- CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer with α -(dimethylsilyl)- ω -[(dimethylsilyl)oxy]poly[oxy(dimethyl

silylene)], 9-ethyl-9-[[2-(2-propenyloxy)ethoxy)methyl]-4,7,11,14-tetraoxaheptadeca-1,16-diene and methyloxirane polymer with oxirane bis(2-methyl-2-propenyl) ether (9CI) (CA INDEX NAME)

CM 1

CRN 134196-67-1

CMF C21 H38 O6

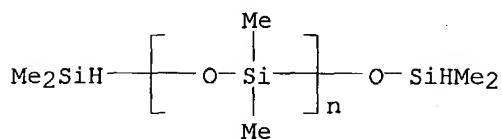


CM 2

CRN 115254-29-0

CMF (C2 H6 O Si)_n C4 H14 O Si2

CCI PMS

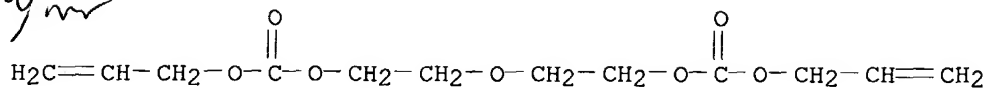


CM 3

CRN 142-22-3

CMF C12 H18 O7

Polymer



CM 4

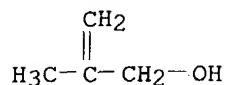
CRN 71061-26-2

CMF C4 H8 O . 1/2 (C3 H6 O . C2 H4 O)_x

CM 5

CRN 513-42-8

CMF C4 H8 O



CM 6

CRN 9003-11-6

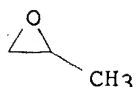
CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 7

CRN 75-56-9

CMF C3 H6 O



CM 8

CRN 75-21-8

CMF C2 H4 O



IT 272109-72-5P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ionically conductive compns. and cells made from them)

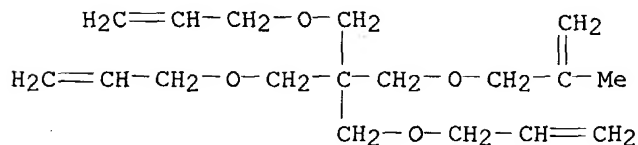
RN 272109-72-5 HCAPLUS

CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer with α -(dimethylsilyl)- ω -[(dimethylsilyl)oxy]poly[oxy(dimethylsilylene)], 1,1,3,3,5,5-hexamethyltrisiloxane, methyloxirane polymer with oxirane di-2-propenyl ether, and 2-methyl-3-[3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]propoxy]-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 272109-71-4

CMF C18 H30 O4

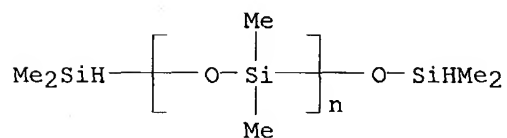


CM 2

CRN 115254-29-0

CMF (C2 H6 O Si)_n C4 H14 O Si2

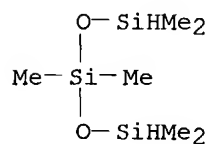
CCI PMS



CM 3

CRN 1189-93-1

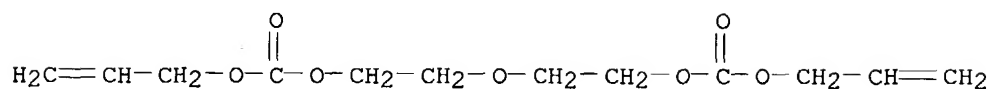
CMF C6 H20 O2 Si3



CM 4

CRN 142-22-3

CMF C12 H18 O7



CM 5

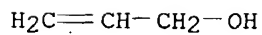
CRN 60120-15-2

CMF (C3 H6 O . C2 H4 O)_x . 2 C3 H6 O

CM 6

CRN 107-18-6

CMF C3 H6 O

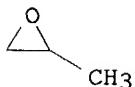


CM 7

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 8

CRN 75-56-9
CMF C3 H6 O



CM 9

CRN 75-21-8
CMF C2 H4 O



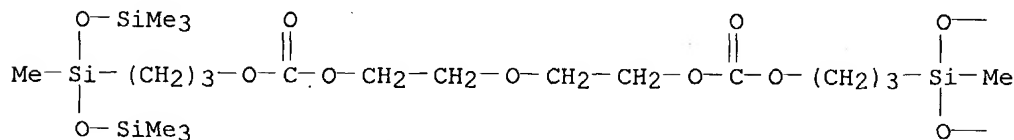
IT 271790-72-8

RL: MOA (Modifier or additive use); USES (Uses)
(ionically conductive compns. and cells made from them)

RN 271790-72-8 HCAPLUS

CN 3,8,10,13,16-Pentaoxa-2,4-disilaheptadecan-17-oic acid,
2,2,4-trimethyl-9-oxo-4-[(trimethylsilyl)oxy]-, 3-[1,3,3,3-tetramethyl-1-
[(trimethylsilyl)oxy]disiloxanyl]propyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—SiMe₃

—SiMe₃

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

AN 1999:620548 HCAPLUS
 DN 131:245549
 TI Ion-conducting polymer **gel electrolytes** and batteries
 using them
 IN Taniuchi, Masahiro; Kato, Ikuo; Kahata, Toshiyuki; Fujii, Toshishige
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11265616	A2	19990928	JP 1998-89315	19980318
	JP 3580523	B2	20041027		
PRAI	JP 1998-89315		19980318		

AB The title **gel electrolytes** contain thermal polymerization
 initiators having half-life ≤ 2 h at temperature lower than b.p. of a
 solvent having lowest b.p. in solvents for the **gels**. Batteries
 using the above **gels** are also claimed. The **gel**
electrolytes have high ion conductivity and strength and suppress
 decrease of energy d. in repeated use.

IC ICM H01B001-12
 ICS H01M006-18; H01M006-22; H01M010-40; C08L033-04

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38, 76

ST ion conducting polymer **gel electrolyte** battery;
 thermal polymn initiator **gel electrolyte** solvent

IT Solvents
 (ion-conducting polymer **gel electrolytes** using
 thermal polymerization initiators and specified solvents for batteries)

IT Battery **electrolytes**
 Conducting polymers
 Ionic conductors
 Polymer **electrolytes**
 Polymerization catalysts
 (ion-conducting polymer **gel electrolytes** using
 thermal polymerization initiators for batteries)

IT Secondary batteries
 (lithium; ion-conducting polymer **gel electrolytes**
 using thermal polymerization initiators for batteries)

IT 78-67-1, 2,2'-Azobisisobutyronitrile 94-36-0, Benzoyl peroxide, uses
 105-64-6, Diisopropylperoxydicarbonate 15520-11-3,
 Bis(4-t-butylcyclohexyl)peroxydicarbonate
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts; ion-conducting polymer **gel electrolytes**
 using thermal polymerization initiators for batteries)

IT 7439-93-2DP, Lithium, acrylic polyoxyalkylene complexes, uses
 28961-43-5DP, Ethoxylated trimethylolpropane triacrylate, polymers with
 methoxypropylene glycol acrylate, lithium complexes 65744-44-7DP,
 lithium complexes 86469-77-4DP, lithium complexes 185383-24-8DP,
 Methyl-diethylene glycol acrylate-trimethylolpropane triacrylate copolymer,
 lithium complexes 187941-84-0DP, Ethoxylated trimethylolpropane
 triacrylate-methyl-diethylene glycol acrylate copolymer, lithium complexes
 211796-46-2DP, Ethyl-diethylene glycol methacrylate-propoxylated
 trimethylolpropane triacrylate copolymer, lithium complexes
 244298-33-7DP, Ethylene glycol dimethacrylate-methyl-diethylene glycol
 acrylate copolymer, lithium complexes

RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ion-conducting polymer **gel electrolytes** using thermal polymerization initiators for batteries)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethylcarbonate 108-32-7, Propylene carbonate 110-71-4 616-38-6, Dimethylcarbonate 156783-95-8 167951-80-6

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(solvents; ion-conducting polymer **gel electrolytes** using thermal polymerization initiators and specified solvents for batteries)

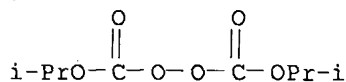
IT 105-64-6, Diisopropylperoxydicarbonate 15520-11-3, Bis(4-t-butylcyclohexyl)peroxydicarbonate

RL: CAT (Catalyst use); USES (Uses)

(catalysts; ion-conducting polymer **gel electrolytes** using thermal polymerization initiators for batteries)

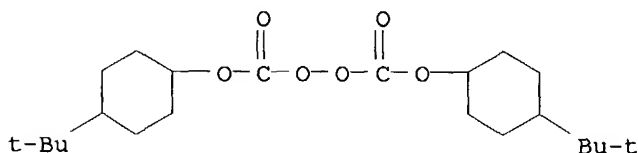
RN 105-64-6 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



RN 15520-11-3 HCAPLUS

CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI) (CA INDEX NAME)



L62 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:283741 HCAPLUS

DN 126:264461

TI Acrylates, allyl ethers, and allyl carbonates, polymers thereof, and solid polyelectrolytes containing the same with high ionic conductivity and chemical stability for electrochemical devices

IN Yokoyama, Keiichi; Sasano, Takako; Hiwara, Akio; Toriida, Masahiro; Mita, Satoko

PA Mitsui Petrochemical Industries, Ltd., Japan; Yokoyama, Keiichi; Sasano, Takako; Hiwara, Akio; Toriida, Masahiro; Mita, Satoko

SO PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9708215	A1	19970306	WO 1996-JP2358	19960823

W: CA, CN, JP, KR, US
 RW: DE, FR, GB, IT, NL

CA 2203385	AA	19970306	CA 1996-2203385	19960823
EP 787749	A1	19970806	EP 1996-927885	19960823
EP 787749	B1	20030402		

R: DE, FR, GB, IT, NL

CN 1164862	A	19971112	CN 1996-190951	19960823
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PRAI JP 1995-215058 A 19950823
 JP 1995-215059 A 19950823
 JP 1995-231864 A 19950908
 JP 1995-231865 A 19950908
 JP 1995-290192 A 19951108
 JP 1995-290193 A 19951108
 WO 1996-JP2358 W 19960823

AB The title monomers have the general formulas $\text{CH}_2\text{:CR1CO}_2(\text{CHR}_2\text{CH}_2\text{O})_n\text{CO}_2\text{R}_3$, $\text{CH}_2\text{:CR4CO}_2(\text{CHR}_5\text{CH}_2\text{O})_p[\text{CO}_2(\text{CHR}_6\text{CH}_2\text{O})_q]\text{rCOCR}_7\text{:CH}_2$, $\text{CH}_2\text{CR}_8\text{CH}_2\text{O}(\text{CHR}_9\text{CH}_2\text{O})_d\text{CO}(\text{OCHR}_{10}\text{CH}_2)_e\text{OR}_{11}$, or $\text{CH}_2\text{:CR13CH}_2\text{OCO}_2(\text{CHR}_{14}\text{CH}_2\text{O})_f\text{CO}_2\text{CH}_2\text{CR}_{15}\text{:CH}_2$ ($\text{R}_1, \text{R}_2, \text{R}_4\text{-10}, \text{R}_{13}\text{-15} = \text{H}, \text{C1-4 alkyl}; \text{R}_3 = \text{C1-4 alkyl}; \text{R}_{11} = \text{C1-4 alkyl}, \text{CH}_2\text{CR}_{12}\text{:CH}_2; \text{R}_{12} = \text{H}, \text{Me}; e, n = 1\text{-}100; p, q, r = 1\text{-}10; d = 0\text{-}10; f = 0\text{-}100$). 2-Methacryloyloxyethyl Me carbonate was prepared from 2-hydroxyethyl methacrylate and di-Me carbonate, cast from propylene carbonate solution containing $\text{LiN}(\text{SO}_2\text{CF}_3)_2$ and Peroyl IPP onto a Teflon-coated glass plate, and heated under N at 70° for 24 h to give a thin-film solid electrolyte with ion conductivity 8.5×10^{-4} S/cm.

IC ICM C08F016-26
 ICS C08F018-24; C08F020-28; C08F299-00; C08G065-32; C07C069-96; H01B001-12; H01M010-40

CC 35-2 (Chemistry of Synthetic High Polymers)

ST solid electrolyte polyacrylate; polyallyl ether solid electrolyte; electrolyte solid polyallyl carbonate; electrochem device solid polymer electrolyte

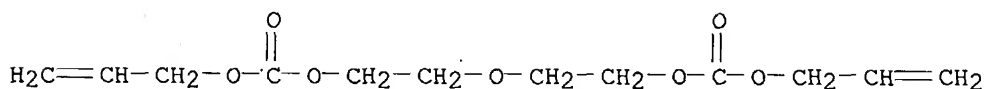
IT Solid electrolytes
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and solid polyelectrolytes containing the same with high ionic conductivity and chemical stability for electrochem. devices)

IT Polycarbonates, preparation
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic; acrylates, allyl ethers, and allyl carbonates, polymers thereof, and solid polyelectrolytes containing the same with high ionic conductivity and chemical stability for electrochem. devices)

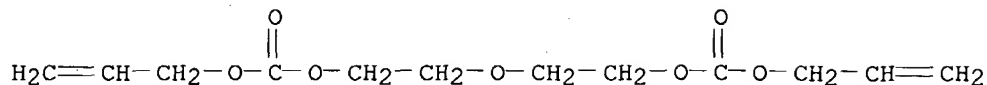
IT 142-22-3P 2351-43-1P 35466-83-2P, Allyl methyl carbonate
 52259-01-5P 116770-34-4P 188779-66-0P 188779-71-7P 188779-75-1P
 188779-76-2P 188779-77-3P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and solid polyelectrolytes containing the same with high ionic conductivity and chemical stability for electrochem. devices)

IT 25656-90-0P 52259-02-6P 116770-35-5P 188779-67-1P
 188779-68-2P 188779-69-3P 188779-70-6P 188779-72-8P 188779-73-9P
 188779-74-0P 188779-78-4P 188779-79-5P 188779-80-8P
 188779-81-9P 188779-82-0P 188779-83-1P
 188779-85-3P 188779-86-4P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and
 solid polyelectrolytes containing the same with high ionic conductivity and
 chemical
 stability for electrochem. devices)
 IT 79-41-4, reactions 107-18-6, Allyl alcohol, reactions 109-86-4,
 Methoxyethanol 111-46-6, reactions 616-38-6, Dimethyl carbonate
 868-77-9, 2-Hydroxyethyl methacrylate 15022-08-9, Diallyl carbonate
 39219-02-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and
 solid polyelectrolytes containing the same with high ionic conductivity and
 chemical
 stability for electrochem. devices)
 IT 7791-03-9, Lithium perchlorate 14283-07-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and
 solid polyelectrolytes containing the same with high ionic conductivity and
 chemical
 stability for electrochem. devices)
 IT 142-22-3P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and
 solid polyelectrolytes containing the same with high ionic conductivity and
 chemical
 stability for electrochem. devices)
 RN 142-22-3 HCAPLUS
 CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester (9CI) (CA
 INDEX NAME)



IT 25656-90-0P 188779-81-9P 188779-82-0P
 188779-83-1P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (acrylates, allyl ethers, and allyl carbonates, polymers thereof, and
 solid polyelectrolytes containing the same with high ionic conductivity and
 chemical
 stability for electrochem. devices)
 RN 25656-90-0 HCAPLUS
 CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester,
 homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 142-22-3
 CMF C12 H18 O7

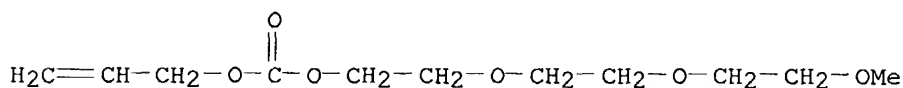


RN 188779-81-9 HCAPLUS
 CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer
 with 2-propenyl 2,5,8,11-tetraoxadodecanoate (9CI) (CA INDEX NAME)

CM 1

CRN 173924-07-7

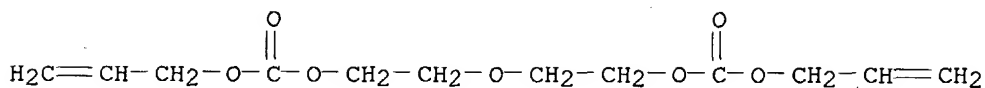
CMF C11 H20 O6



CM 2

CRN 142-22-3

CMF C12 H18 O7

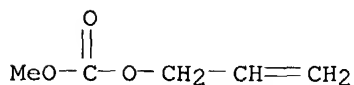


RN 188779-82-0 HCAPLUS
 CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer
 with methyl 2-propenyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 35466-83-2

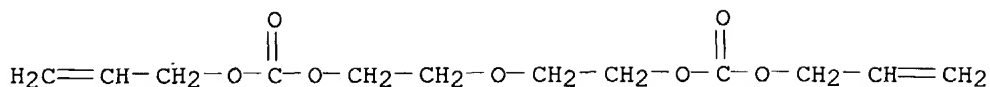
CMF C5 H8 O3



CM 2

CRN 142-22-3

CMF C12 H18 O7



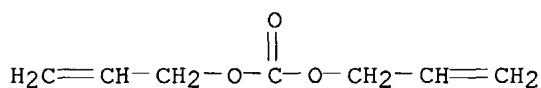
RN 188779-83-1 HCAPLUS

CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer with di-2-propenyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 15022-08-9

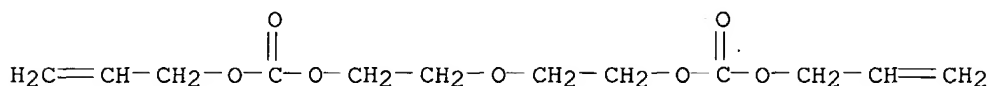
CMF C7 H10 O3



CM 2

CRN 142-22-3

CMF C12 H18 O7



L62 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:497206 HCAPLUS

DN 119:97206

TI Microencapsulated curing agents and their manufacture and use in unsaturated polyester compositions

IN Ujigawa, Norihisa; Takamura, Masumi; Matsuyama, Kazuo

PA Nippon Oils & Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

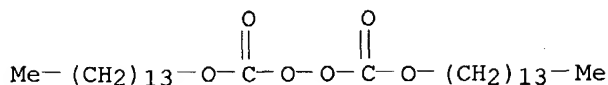
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 05078411	A2	19930330	JP 1991-266948	19910919
	JP 3168627	B2	20010521		
PRAI	JP 1991-266948		19910919		

AB Title microcapsules showing good storability in unsatd. polyester compns. comprise a core consisting of organic peroxides which are capable of curing unsatd. polyesters and solid at ambient temperature with a difference of $\geq 5^\circ$ between their m.p. and thermal decomposition temperature and a two-layer covering which is inert to the unsatd. polyesters and the core, solid at ambient temperature, melts at the curing temperature of the unsatd. polyesters, and consists of an inner layer of polymeric

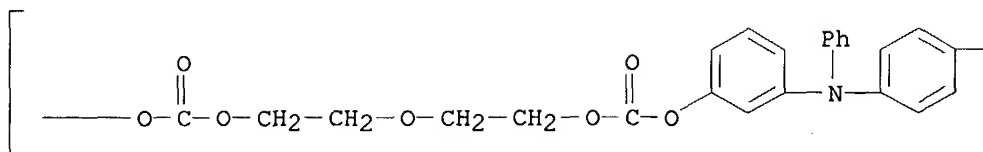
electrolytes and an outer layer of polymers of (meth)acrylate esters and/or aromatic vinyl compds. Thus, a mixture of unsatd. polyesters and microcapsules with average diameter 50 μ m containing a dimyristyl peroxydicarbonate core, an inner layer of gelatin and gum arabic, and an outer layer of Me methacrylate-trimethylolpropane triacrylate copolymer showed **gel** time 4.5 mo when kept at 10° vs. 14 days with the unencapsulated peroxide.

- IC ICM C08F004-32
ICS B01J013-14
- CC 37-6 (**Plastics** Manufacture and Processing)
- ST microencapsulation org peroxide curing agent; unsatd polyester curing agent microencapsulation; two layer covering microencapsulation peroxide; **electrolyte** microencapsulation peroxide curing agent; acrylic microencapsulation peroxide curing agent; storage stability microencapsulation peroxide
- IT Crosslinking agents
(organic peroxides, microencapsulated, for unsatd. polyesters)
- IT Gelatins, uses
RL: USES (Uses)
(two-layer microencapsulation with acrylic polymers and, of organic peroxide crosslinking agents for unsatd. polyesters, for improved storage stability)
- IT Encapsulation
(micro-, two-layer, with **electrolytes** and acrylic polymers, of organic peroxide crosslinking agents for unsatd. polyesters, for improved storage stability)
- IT Peroxides, uses
RL: MOA (Modifier or additive use); USES (Uses)
(organic, crosslinking agents, microencapsulated, for unsatd. polyesters)
- IT Polyesters, miscellaneous
RL: MSC (Miscellaneous)
(unsatd., microencapsulated crosslinking agents for, for improved storage stability)
- IT 12262-58-7, Cyclohexanone peroxide **53220-22-7**, Dimyristyl peroxydicarbonate
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, microencapsulated in two layers, with improved storage stability, for unsatd. polyesters)
- IT 9000-01-5, Gum arabic
RL: USES (Uses)
(two-layer microencapsulation with acrylic polymers and, of organic peroxide crosslinking agents for unsatd. polyesters, for improved storage stability)
- IT 9003-70-7, Divinylbenzene-styrene copolymer 52271-32-6, Methyl methacrylate-trimethylolpropane triacrylate copolymer
RL: USES (Uses)
(two-layer microencapsulation with polymer **electrolytes** and, of organic peroxide crosslinking agents for unsatd. polyesters, for improved storage stability)
- IT **53220-22-7**, Dimyristyl peroxydicarbonate
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, microencapsulated in two layers, with improved storage stability, for unsatd. polyesters)
- RN 53220-22-7 HCAPLUS
- CN Peroxydicarbonic acid, ditetradecyl ester (9CI) (CA INDEX NAME)

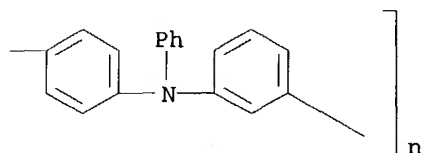


L62 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1991:571691 HCAPLUS
 DN 115:171691
 TI Hole diffusion in triarylamine polymer films in a contacting
electrolyte: initial comparison with hole mobilities
 AU Facci, John S.; Abkowitz, Martin; Limburg, William; Knier, Fred; Yanus,
 John; Renfer, Dale
 CS Webster Res. Cent., Xerox, Webster, NY, 14580, USA
 SO Journal of Physical Chemistry (1991), 95(20), 7908-14
 CODEN: JPCHAX; ISSN: 0022-3654
 DT Journal
 LA English
 AB The first comparison of hole diffusion and mobility in a discrete hopping
 charge-transport polymer is presented. Charge transport (hole diffusion)
 in a triarylamine containing polymer in contact with a **liquid**
electrolyte is measured electrochem. by steady-state voltammetry
 and characterized by a hole diffusion coefficient D_h . D_h Rise with time spent
 in the oxidized state and is apparently due to electroanodic crosslinking
 of the polymer. That counterion transport is not rate limiting during the
 measurement of D_h in the un-cross-linked polymer is rigorously
 demonstrated. Comparison of activation data suggests that hole hopping in
 the un-cross-linked and cross-linked polymers proceeds by different
 mechanistic pathways. Time of flight (TOF) drift mobilities M are
 measured in the un-cross-linked polymer and compared with D_h via the
 Einstein equation over a range of temps. Predicted values of zero-field
 mobilities from D_h and the Einstein equation agree qual. with exptl.
 mobilities. The predicted mobility activation energy, however, is
 somewhat low relative to the exptl. results. This is attributed to the
 differences in the phys. state of the polymer in the two measurements. D_h
 Measurements are done in a **liquid electrolyte** while
 mobility measurements are done in the solid state. This leads to
 differences in the coupling of the electron-exchange step with microscopic
 polymer motions in the two techniques.
 CC 76-1 (Electric Phenomena)
 Section cross-reference(s): 36, 72
 ST hole diffusion triarylamine polymer film
 IT Hole
 (diffusion and mobility of, in triaryl in polymer films in contacting
electrolyte)
 IT 134247-74-8 136444-41-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (hole diffusion and mobility in films of, in contacting
electrolyte)
 IT 134247-74-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (hole diffusion and mobility in films of, in contacting
electrolyte)
 RN 134247-74-8 HCAPLUS
 CN Poly[oxy-carbonyloxy-1,2-ethanedioxy-1,2-ethanedioxy-carbonyloxy-1,3-
 phenylene(phenylimino)[1,1'-biphenyl]-4,4'-diyl(phenylimino)-1,3-
 phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



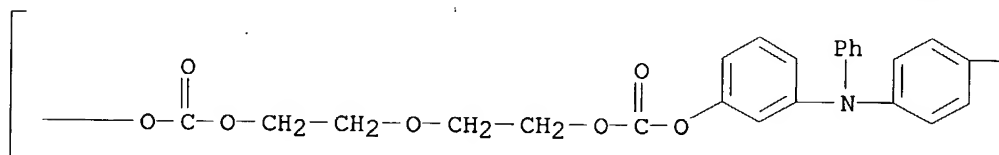
PAGE 1-B



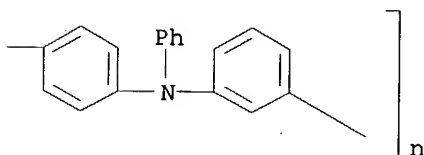
- L62 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1991:248212 HCAPLUS
 DN 114:248212
 TI Comparison of hole hopping diffusion and migration in a triarylamine-containing polymer
 AU Facci, John S.; Abkowitz, Martin A.; Limburg, William W.; Renfer, Dale S.; Yanus, John F.
 CS Xerox Corp., Webster, NY, 14580, USA
 SO Molecular Crystals and Liquid Crystals (1991), 194, 55-63
 CODEN: MCLCA5; ISSN: 0026-8941
 DT Journal
 LA English
 AB Electron hopping charge transport rates in a triarylamine-containing polymer were investigated electrochem. in the presence of a contacting **electrolyte** and in the solid state (absence of **liquid electrolyte**). Electron hopping diffusion coeffs. (Dh.cm2/S) were measured by steady-state voltammetry in thin polymer films on Au microelectrode interdigitated arrays. In addition, zero-field extrapolated electron hopping mobilities and zero-filled activation energies are obtained from time-of-flight measurements. Dh And diffusion activation energies obtained in solid-state electrochem. expts. can be correlated with zero-field hole mobilities (cm2/V-s) and activation energies via the Einstein relationship.
 CC 36-5 (Physical Properties of Synthetic High **Polymers**)
 Section cross-reference(s): 76
 ST triarylamine contg polymer hole hopping diffusion; migration triarylamine contg polymer; mobility hopping triarylamine contg polymer
 IT Hole
 (hopping diffusion of, in triarylamine-containing polymer, comparison of, with charge migration)
 IT Diffusion
 (hopping, in triarylamine-containing polymer, comparison of, with charge migration)
 IT Polyoxyalkylenes, properties
 RL: PRP (Properties)
 (polycarbonate-, triarylamine-containing, hole hopping diffusion and

migration in, comparative study of)
 IT Polycarbonates, properties
 RL: PRP (Properties)
 (polyoxyalkylene-, triarylamine-containing, hole hopping diffusion and migration in, comparative study of)
 IT **134247-74-8**
 RL: PRP (Properties)
 (hole hopping diffusion and migration in, comparative study of)
 IT **134247-74-8**
 RL: PRP (Properties)
 (hole hopping diffusion and migration in, comparative study of)
 RN 134247-74-8 HCAPLUS
 CN Poly[oxy carbonyloxy-1,2-ethanedioxy-1,2-ethanedioxy carbonyloxy-1,3-phenylene(phenylimino)[1,1'-biphenyl]-4,4'-diyl(phenylimino)-1,3-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A

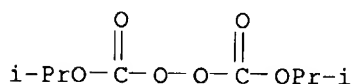


PAGE 1-B

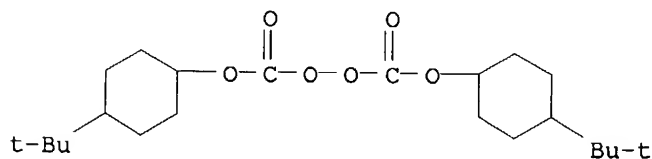


L62 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1984:209053 HCAPLUS
 DN 100:209053
 TI Polarographic studies on the decomposition of some organic peroxides
 AU Kirsch, Dietmar; Kusch, Ruediger; Luther, Manfred
 CS Kombinat VEB Chem. Werke Buna, Schkopau, DDR-4212, Ger. Dem. Rep.
 SO Zeitschrift fuer Chemie (1983), 23(12), 456-8
 CODEN: ZECEAL; ISSN: 0044-2402
 DT Journal
 LA German
 AB A study was made on the decomposition of the title peroxides in reference to their use as initiators in plastics manufacture To determine the decomposition constant, a 0.01 M solution of each of the 12 initiators was used in 0.5 M LiCl in 3:1 MeOH-C6H6 as the supporting electrolyte. As solvents for the peroxides, Me2CO, o-xylene, di-Me phthalate and ClCH2CH2Cl were used. Results are given as dependence on temps. of 313, 318, 323, 328, 333, 338, 343 and 353 K.
 CC 22-13 (Physical Organic Chemistry)
 Section cross-reference(s): 35

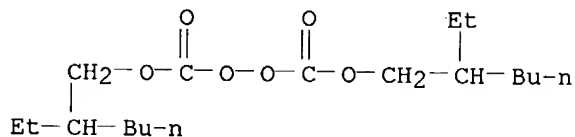
ST peroxide initiator decompn polarog detn; solvent effect peroxide initiator decompn
 IT Peroxides, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (decomposition of, kinetics of, polarog. study of)
 IT Kinetics of thermal decomposition
 (of organic peroxides, polarog. study of)
 IT Reduction, electrochemical
 (polarog., decomposition of organic peroxides in relation to)
 IT 78-67-1 105-64-6 105-74-8 927-07-1 3179-56-4 4419-11-8
 15520-11-3 16111-62-9 26322-14-5 26748-41-4
 53220-22-7 68299-16-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (decomposition of, kinetics of)
 IT 105-64-6 15520-11-3 16111-62-9
 26322-14-5 53220-22-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (decomposition of, kinetics of)
 RN 105-64-6 HCAPLUS
 CN Peroxydicarbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



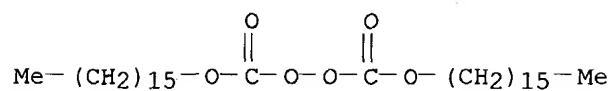
RN 15520-11-3 HCAPLUS
 CN Peroxydicarbonic acid, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI)
 (CA INDEX NAME)



RN 16111-62-9 HCAPLUS
 CN Peroxydicarbonic acid, bis(2-ethylhexyl) ester (7CI, 8CI, 9CI) (CA INDEX NAME)

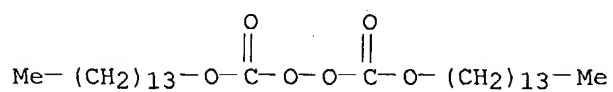


RN 26322-14-5 HCAPLUS
 CN Peroxydicarbonic acid, dihexadecyl ester (8CI, 9CI) (CA INDEX NAME)



RN 53220-22-7 HCAPLUS

CN Peroxydicarbonic acid, ditetradecyl ester (9CI) (CA INDEX NAME)



=>